DOCUMENT RESUME

ED 386 502 TM 024 106

AUTHOR	Green, Patricia J.; And Others
TITLE	A Profile of the American High School Senior in 1992. National Education Longitudinal Study of 1988. Statistical Analysis Report.
INSTITUTION	National Opinion Research Center, Chicago, Ill.
SPONS AGENCY	National Center for Education Statistics (ED), Washington, DC.
REPORT NO	ISBN-0-16-048127-9; NCES-95-384
PUB DATE	Jun 95
NOTE	321p.
AVAILABLE FROM	U.S. Government Printing Office, Superintendent of Documents, MAIL Stop: SSOP, Washington, DC 20402-9328.
PUB TYPE	Statistical Data (110) -- Reports - Evaluative/Feasibility (142)
EDRS PRICE	MF01/PC13 Plus Postage.
DESCRIPTORS	*Academic Achievement; Academic Aspiration; Career Planning; *College Bound Students; *Educational Environment; Ethnic Groups; Experience; Extracurricular Activities; High Schools; *High School Seniors; National Surveys; Part Time Employment; *Profiles; Racial Differences; Social Development; *Student Characteristics; Television Viewing
IDENTIFIERS	*National Education Longitudinal Study 1988

ABSTRACT

The National Education Longitudinal Study of 1988 (NELS:88) provides information about factors that influence student academic performance and social development. This report describes the experiences of spring 1992 seniors, focusing on their school environments, course-taking and tested achievement, postsecondary plans and occupational goals, and outside-of-school experiences. The typical senior was enrolled in a college preparatory program. Nine of 10 seniors demonstrated basic proficiency in reading and mathematics, but somewhat fewer demonstrated basic proficiency in science. Three-quarters of all seniors planned on continuing their educations beyond high school, and over half expected to hold a professional occupation. Over a quarter of all seniors were from racial and ethnic minority groups. Students generally reported that the quality of education in their schools was good, that their teachers were interested in their students, and that grading was fair. About half of all students worked in addition to going to school. Students participated in a variety of extracurricular activities, but reported a great deal of television viewing. Thirty-three tables and 18 figures present survey data. Eight appendixes contain supplemental information, including 13 tables of standard errors and sample sizes. Appendix H contains abstracts of analytical documents related to the survey. (SLD)

ED 386 502

NATIONAL CENTER FOR EDUCATION STATISTICS

Statistical Analysis Report June 1995

National Education Longitudinal Study of 1988

A Profile of the American High School Senior in 1992

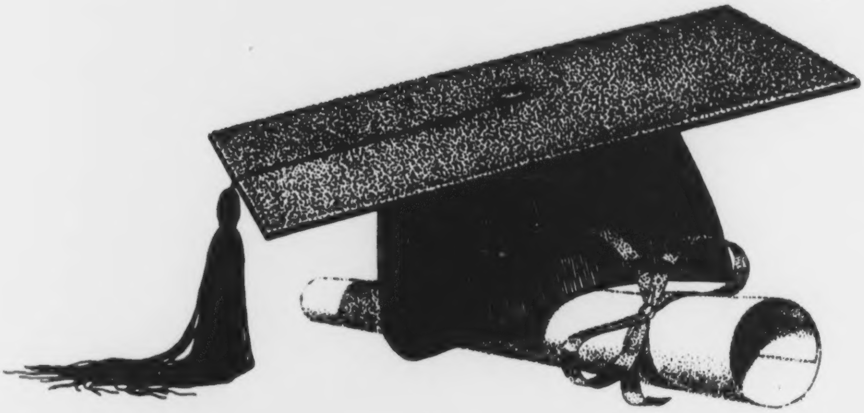
TEACHERS PARENTS SCHOOLS STUDENTS
NELS
88

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it

☐ Minor changes have been made to improve reproduction quality

- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy



U.S. Department of Education
Office of Educational Research and Improvement NCES 95-384

TM024106

BEST COPY AVAILABLE

NATIONAL CENTER FOR EDUCATION STATISTICS

Statistical Analysis Report June 1995

National Education Longitudinal Study of 1988

A Profile of the American High School Senior in 1992

Patricia J. Green
Bernard L. Dugoni
Steven J. Ingels
Eric Camburn

National Opinion Research Center (NORC)
at the University of Chicago

Peggy Quinn
Project Officer
National Center for Education Statistics

U.S. Department of Education
Office of Educational Research and Improvement **NCES 95-384**

U.S. Department of Education
Richard W. Riley
Secretary

Office of Educational Research and Improvement
Sharon P. Robinson
Assistant Secretary

National Center for Education Statistics
Emerson J. Elliott
Commissioner

National Center for Education Statistics

The purpose of the Center is to collect and report "statistics and information showing the condition and progress of education in the United States and other nations in order to promote and accelerate the improvement of American education."—Section 402(b) of the National Education Statistics Act of 1994 (20 U.S.C. 9001).

June 1995

Contact:
Peggy Quinn
(202) 219–1743

For sale by the U.S. Government Printing Office
Superintendent of Documents, Mail Stop: SSOP, Washington, DC 20402-9328
ISBN 0-16-048127-9

Highlights: Summary of Findings

The high school experiences of seniors in the 1990's reflect the larger world in which they live. Compared to a decade ago, enrollment in college preparatory programs is up[1]. The typical senior today is enrolled in a college preparatory program and has completed at least two math and two science courses. Nine out of ten seniors demonstrate basic proficiency in reading and mathematics; somewhat fewer demonstrate basic proficiency in science.

While college was once a path for only a minority of students, three-quarters of all seniors now plan to continue their education beyond high school, and most of these expect to complete college. This is in keeping with their career goals: well over half of all seniors expect to hold a professional occupation at age 30. It appears that high school seniors are trying to prepare themselves for work in the 21st century.

Background Characteristics of High School Seniors

Any discussion of high school achievement or educational aspirations must include an examination of the demographic and societal differences that may influence adolescents as they progress through school. For the high school class of 1992, specific characteristics that can be used to describe this class include:

- Approximately six out of ten seniors have a parent who continued his or her education beyond high school.
- Over a quarter of all 1992 seniors (27 percent) are from racial and ethnic minority groups, 73 percent are white.
- Twelve percent are black, 10 percent are Hispanic, about 4 percent are of Asian descent, and less than one percent are American Indian.
- Less than 20 percent of white seniors come from the lowest quartile socioeconomic status (SES) group. One half of Hispanics and 43 percent of blacks come from this group.

Note that these figures represent seniors enrolled in high school in the spring of 1992; dropouts are excluded. An estimated 12 percent of the 1988 expanded eighth grade cohort were considered dropouts in the spring of 1992.

The School Environment

Almost all seniors report that the quality of teaching in their schools is good, that teachers are interested in students, and that grading is fair. There is little variation in these perceptions by gender, race, urbanicity, or region, although Hispanics are somewhat more likely than whites to report that teaching at their school is good and blacks are somewhat less likely than whites to believe that students are graded fairly.

---

[1] For a description of earlier cohorts of high school seniors, see Green, P., Dugoni, B., and Ingels, S., *Trends Among High School Seniors, 1972-1992*. Washington, D.C.: National Center for Education Statistics. (NCES 95-380).

School is perceived to be a safe environment by the vast majority of students; only 10 percent of seniors report that they do not feel safe at school. However, safety at school is still a concern.

- Thirty-one percent of seniors have had something stolen from them while at school.
- Fifteen percent of seniors report that someone has threatened to hurt them while at school.

Curriculum and Achievement

High school program. Typically, high schools place students into one of three broad program types: college preparatory programs, vocational programs, and general education programs.

- Almost half (48 percent) of all seniors are enrolled in college preparatory programs. Twelve percent of seniors are in vocational or technical programs, while the remaining 40 percent are in general high school programs.

The gap that was apparent between males and females in program placement 20 years ago has disappeared. Males and females are now enrolled in college preparatory and vocational programs at approximately the same rate. However, program placement both for males and for females is still strongly tied to parents' education and socioeconomic status (SES).

Courses taken. In 1984, the National Commission on Excellence in Education recommended that high school students should take a more rigorous sequence of courses. The "New Basics" core curriculum, first advocated in *A Nation at Risk*, consists of a standard set of courses that students should be expected to take: 4 years of English, 3 years of social studies, 3 years of math, and 3 years of science courses. Progress is being made toward this goal.

- Thirty-nine percent of seniors have completed the recommended sequence of courses.
- An additional 23 percent of seniors have taken 4 years of English, 3 years of social studies, 2 years of mathematics and two years of science.
- Approximately one-third of students (37 percent) did not complete the minimum combination of 4 English, 3 social studies, 2 mathematics and 2 science courses.

Patterns of high school coursework vary among social and demographic subgroups.

- Females are more likely than males to have taken the minimum standard combination of courses.
- Seniors from low SES families are less likely to take the minimum set of courses than those from high SES families.
- Hispanic seniors are more likely than white seniors to be below the recommended standards for course-taking.

Tested achievement. As part of the NELS:88 Second Follow-Up, seniors were also asked to complete a cognitive battery to test their achievement in reading, math, and science. These tests were constructed to measure achievement at levels ranging from the ability to complete simple tasks to drawing complex inferences.

Achievement in Reading

- In reading, 62 percent of seniors demonstrate proficiency at intermediate and advanced levels. These students are able to understand and evaluate written arguments and make inferences based on the information presented in the text.

- Thirty-one percent of seniors can grasp the main point of a paragraph but are unable to go beyond this simple task.

- Approximately one in twelve seniors (8 percent) cannot comprehend basic written information.

Achievement in Mathematics

- Sixty percent of seniors demonstrate competency at the intermediate level or above. These students can solve word problems; some at an advanced level.

- Thirty-four percent demonstrate competency in basic arithmetic but are unable to solve simple problems in mathematics.

- Approximately 6 percent of seniors cannot demonstrate basic proficiency in math. In short, these seniors cannot successfully perform even simple arithmetic computations.

Achievement in Science

- Fifty-three percent of seniors are able to demonstrate an understanding of fundamental science concepts.

- Thirty percent of seniors possess only basic, "common knowledge", information about science.

- Sixteen percent of seniors fail to attain the most basic level of science proficiency.

Disparities in achievement between racial and ethnic groups may reflect economic and social inequalities that have been an historical reality in U.S. society. To make meaningful comparisons of achievement across racial and ethnic groups, it is important to hold socioeconomic status constant. When SES is held constant, a significant difference between black and white seniors in reading proficiency is observed only for the middle SES group. However, blacks are less likely than whites to demonstrate advanced proficiency in science; this is true of blacks in low, middle, and high socioeconomic groups. Significant differences are observed between Hispanic and white seniors in reading and in science, but only in the high SES group: high SES Hispanic seniors are less likely than high SES white seniors to demonstrate advanced proficiency.

In addition to background variables such as SES and school type, other variables, such as student effort and time on task may be considered as more direct determinants of student achievement. Time spent on homework is a good indicator of effort.

- Seniors who spend more than one hour a day completing homework perform better than their peers who spend less than one hour on achievement tests of reading, mathematics, and science.
- The amount of time spent on homework seems to be strongly related to mathematics proficiency. Forty-six percent of those who spend at least 7 hours a week doing homework perform at the highest level of mathematics proficiency, while 20 percent of those who spend less than one hour perform at that level.

Twelfth Graders' Postsecondary Plans

Having a college education has become increasingly important for employment and income. Roughly three-quarters of seniors plan to continue their education after high school.

- Females are more likely than males to intend to continue on to school immediately after graduation--78 percent of women compared to 69 percent of men plan to go to a postsecondary institution right after high school graduation.

Overall, two-thirds of the nation's high school seniors expect to complete a college program, and nearly half of these expect to receive a graduate degree.

- While approximately equal proportions of male and female seniors expect to finish college, significantly more females expect to obtain a graduate degree.

Furthermore, while 5 percent of the total sample expect to go no further than high school, the percentage is significantly lower for females (3.8 percent) than for males (6.3 percent).

Occupational Goals

The largest percentage of seniors choose business as their most likely field of study, followed by "pre-professional" programs, health, engineering, and education. A gender gap exists in some occupations: education, health, pre-professional programs, and psychology are chosen by a greater proportion of females, while a significantly greater proportion of males choose engineering. Within non-academic training fields, the largest gender differences exist in health care, cosmetology, secretarial, auto mechanics, and electronics, with men showing the greater preference with regard to the latter two fields.

Choices regarding fields of training are consistent with reported occupational goals.

- Nearly half of all seniors think they will have a professional occupation at age 30.
- An additional 11 percent believe they will hold business management positions at age 30, either as a manager in an organization (5 percent) or as a small-business owner (6 percent).

Experiences Outside of School

Only part of a student's life is spent in school. What happens after school--at home, with friends, at work--is equally as important. Extracurricular activities, for example, can play an important positive role in students' growth and development. However, other activities in which many students engage can be harmful, such as drug and alcohol abuse.

Work. About half of all seniors work in addition to going to school. Two-thirds of working seniors are employed half-time or less, and one-third work more than 20 hours per week.

- Fewer males than females are employed (48 percent compared to 52 percent).
- A larger proportion of whites are employed than any other racial or ethnic group (54 percent compared to less than 42 percent).

Community service. Finally, 44 percent of high school seniors report that they have performed community volunteer work during the past two years.

- More females than males (50 percent versus 39 percent) have performed community volunteer work.
- Seniors from homes in which parents are well-educated are more likely to be involved in volunteer activities.
- Seniors who report that they are in academic/college preparatory programs are more likely to be involved in community volunteer work than are seniors who report that they are in vocational or general programs.

Drug and alcohol use. Approximately one-quarter of all high school seniors have tried marijuana. However, nearly 9 out of 10 high school seniors, 88 percent, report having tried alcohol.

- Over one-quarter of all seniors report drinking five or more drinks in a row during the past two weeks.

Alcohol use is more prevalent among high school seniors than either marijuana or cocaine. It is especially prevalent among white and Hispanic seniors, the two groups who are also more likely to report using illicit drugs.

Television viewing. By their own estimates, seniors watch a great deal of television.

- Forty percent report viewing television for more than twenty hours per week.

- Less than a quarter of all seniors watch ten hours of television or less per week.

- The difference between the television viewing habits of black seniors and seniors of other racial groups is striking. Sixty-two percent of black seniors report watching more than twenty hours of television each week. In contrast, 36 percent of white seniors watch television more than 20 hours each week.

The type of school appears to be unrelated to the amount of time a student spends watching television. However, seniors in the top quarter of their class are less likely than others to watch more than 20 hours of television each week.

Foreword

The National Education Longitudinal Study of 1988 (NELS:88) provides a wealth of information about factors that influence student academic performance and social development and the processes through which these factors operate. Under the sponsorship of the National Center for Education Statistics (NCES), with additional support from the National Science Foundation (NSF), the Office of Bilingual Education and Minority Languages Affairs (OBEMLA), and other entities and agencies, NELS:88 is being conducted in several waves.

The first wave (the 1988 base year) recorded the experiences of a nationally representative sample of eighth graders within a nationally representative sample of their schools. The second wave (the 1990 first follow-up) returned to the cohort two years later, when most were sophomores, and others were dropouts or in other grades. The third wave (the 1992 second follow-up) examined the eighth grade cohort at a time when most were high school seniors, while the fourth wave (the 1994 third follow-up) followed NELS:88 sample from school to the work force or postsecondary institutions. A fifth wave is scheduled for 1998.

The longitudinal design of NELS:88 permits researchers not only to observe the critical transition of students from middle or junior high school to high school, but also to identify early student, school, and parental experiences that promote learning. The study's longitudinal design also permits researchers to explore the link between high school achievement and subsequent statuses and attainment, as individuals are followed after high school, and event histories are chronicled in 1994 of their transition to postsecondary institutions, the labor market, marriage, and parenthood.

This report delineates the experiences of spring 1992 high school seniors. It describes, in particular, seniors' school environment, their course-taking and tested achievement, postsecondary plans and occupational goals, and such outside-school experiences such as substance abuse, television viewing, and volunteer community service activities.

In order to produce a concise report in which seniors speak largely for themselves, *A Profile of the American High School Senior in 1992* relies primarily on data gathered from students or their school records. Nevertheless, readers should be aware that NELS:88 takes into consideration the much larger environment in which the student functions and develops. Thus, in addition to student test, transcript, and self-report data, NELS:88 incorporates supporting data from students' school principals, parents, and teachers to identify additional factors that affect student achievement and future educational and occupational outcomes.

We hope that this report will be of interest to policymakers and their advisors, and to educators and education researchers. Policymakers can use NELS:88 results to turn statistics into practical, workable programs to help solve the problems facing the American educational system and its students. Researchers may use NELS:88 data to explore and further illuminate the condition and prospects of American secondary education.

Paul Planchon
Associate Commissioner of Education Statistics

Jeffrey Owings
Chief, Longitudinal and Household Studies Branch

Acknowledgements

We would like to thank the many people, organizations, and institutions that contributed to the National Education Longitudinal Study of 1988 (NELS:88) second follow-up.

The NELS:88 Technical Review Panel advised the National Center for Education Statistics' contractor for NELS:88--the National Opinion Research Center (NORC) at the University of Chicago--on design and questionnaire development issues. Members of the panel were Jerald G. Bachman, Program Director and Research Scientist, Institute for Social Research, University of Michigan; Gordon Ensign, Supervisor, Testing and Evaluation, State of Washington; Lyle V. Jones, Director, L.L. Thurstone Psychometric Laboratory, University of North Carolina; Nancy L. Karweit, Principal Research Scientist, Center for Social Organization of Schools, Johns Hopkins University; Patricia Shell, formerly the Superintendent of the Brazosport Independent School District, Freeport, Texas; Marshall L. Smith, Dean, College of Education, Stanford University; Richard J. Murnane, Associate Professor of Education, Harvard University; and John Stiglmeier, formerly the Director of the Information Center on Education, New York State Department of Education.

Support for study supplements was provided by a number of agencies. The National Science Foundation (NSF) sponsored supplemental questions on the survey instruments as well as the survey of mathematics and science teachers. The Office of Bilingual Education and Minority Languages Affairs (OBEMLA) sponsored supplemental samples of Hispanic and Asian Americans and provided supplemental funding for questionnaire items on language minority issues.

The study was overseen by NCES staff in the Longitudinal and Household Studies Branch, Jeffrey A. Owings, Branch Chief. Peggy Quinn was the NCES Project Officer. Other NCES staff who assisted in the 1992 second follow-up include Ralph Lee, Shi-Chang Wu, and Jerry West of the Longitudinal and Household Studies Branch and Bob Burton of the Statistical Standards and Methodology Division.

Under a subcontract to the National Opinion Research Center (NORC) at the University of Chicago, the Educational Testing Service (ETS) developed the cognitive test battery. Donald A. Rock of ETS was the Task Leader for Test Development, assisted by Judith M. Pollack. Steven J. Ingels was the NORC Project Director for the NELS:88 second follow-up. Other principal members of the NELS:88 second follow-up project team included the following NORC staff: Lisa Thalji and Kathryn L. Dowd, Associate Project Directors; Martin R. Frankel, Task Leader for Sampling and Statistics; Patricia J. Green, Task Leader for Analysis; Leslie A. Scott, Project Manager for the School Effectiveness Study; Laura Reed and Virginia Bartot, Data Processing Managers; and Paul Pulliam, Kenneth Rasinski, John R. Taylor, Supriti Sehra, John Baldridge, and James Stipe. The data files were constructed and weights created with the help of NORC's programming staff, particularly Doug Barge, Michael Ma, Gloria Rauens, Shiow-Ling Tsai-Ma, and Hsiuling Young.

A Profile of the American High School Senior in 1992 was prepared by NORC under the supervision of NCES. The principal authors are Patricia J. Green, Bernard L. Dugoni, and Steven J. Ingels of NORC; and Eric Camburn of the University of Chicago, who provided statistical support. Bronwyn Nichols contributed to early drafts of this report. Document production support at NORC was provided by Karen L. Sutherlin, Whitney Moore, Vivian Tillman, Marilyn Ford, and Jeffrey C. Cothran.

The authors are grateful for the helpful suggestions provided by reviewers. Robert Burton, Ralph Lee, Andrew Malizio, Edith McArthur, Jeffrey Owings, and Peggy Quinn of NCES; Anne Hafner of California State and Gordon Ensign of the State of Washington's Department of Education.

A Profile of the American High School Senior in 1992
Table of Contents

Page

Highlights: Summary of Finding iii
Foreword ix
Acknowledgements x
List of Appendices xiii
List of Tables xiv
List of Figures xvii
Introduction xix

Chapter 1: A Demographic Profile of Seniors 1
  Background Characteristics of High School Seniors 1
  Types of Schools Attended 11

Chapter 2: The School and Peer Environment 17
  Seniors' Perception of School 17
  Perceived Safety at School 21
  Victimization in School 26
  Peer Values 29

Chapter 3: Course and Program Enrollments 34
  High School Program 34
  Enrollment in Basic New Courses 39
  Courses Taken 43
  Student Engagement 45

Chapter 4: Tested Achievement 49
  An Overview of Proficiency Levels 49
  Proficiency Levels and Demographic Characteristics 55
  Race, Social Class, and Achievement 63
  Social Class, School Composition, and Achievement 67
  Student Achievement by Student Effort and Enrollment 69

Chapter 5: Short-Term Plans 73
  Twelfth Graders' Postsecondary Plans 73
  Types of Postsecondary Schools Seniors are Most Likely to Attend 78
  Steps Seniors Have Taken to Gain College Entrance 82
  Choosing a College 85

Chapter 6: Plans and Expectations for the Future 88
  Educational Expectations of Seniors and Their Parents 88
  Field of Study or Training 91
  Occupational Goals 99
  Education and Occupational Choice 103

Table of Contents (Cont'd)

Page

Chapter 7: Experiences Outside of School **105**
Work 105
School Government and Volunteer Work 108
Illicit Drugs 112
Alcohol 116
Television 119

List of Appendices

Page

Appendix A: NELS:88 Study Design 124

Appendix B: Description of Variables Used in Report 130

Appendix C: Methodology Used in Report 140

Appendix D: Data for Figures 143

Appendix E: Standard Errors and Sample Sizes for Tables 164

Appendix F: Tables of Ancillary Analyses of Plans and Expectations (Chapter 6) 236

Appendix G: Standard Errors and Sample Sizes for the Estimates in Appendix F 246

Appendix H: NCES NELS:88 Publications 256

List of Tables

Page

Table 1.1: Highest Level of Parents' Education for 1992 High School Seniors by Race 10

Table 1.2: Percent of 1992 High School Seniors in Each Region by Race 10

Table 1.3: Percent of 1992 High School Seniors Attending Various Classifications of Schools by Race and Social Class 14

Table 2.1: Percent of 1992 High School Seniors Who Agree with Statements about Teaching and Grading 18

Table 2.2: Percent of 1992 High School Seniors Who Agree with Statements about School Safety 22

Table 2.3: Percent of 1992 High School Seniors Who Report Being Victimized at School 27

Table 2.4: Percent of 1992 High School Seniors Who Report that Close Friends Feel Various Academic Activities Are "Very Important" 32

Table 3.1: Percent of 1992 High School Seniors Who Report Enrollment in Different High School Programs 36

Table 3.2: Percent of 1992 High School Seniors Completing Various Combinations of "New Basics" Courses 40

Table 3.3: Percent of 1992 High School Seniors Who Report Spending Various Amounts of Time Per Week Doing Homework Outside of School 47

Table 4.1a: Percent of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Reading by Demographic and School Characteristics 56

Table 4.1b: Percent of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Mathematics by Demographic and School Characteristics 58

Table 4.1c: Percent of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Science by Demographic and School Characteristics 60

Table 4.2a: Percentage of 1992 High School Seniors Proficiency in Reading, by Race, Controlling for SES 64

Table 4.2b: Percentage of 1992 High School Seniors Overall Math Proficiency by Race, Controlling for SES 65

Table 4.2c: Percentage of 1992 High School Seniors Proficiency in Science by Race, Controlling for SES 66

List of Tables (Cont'd)

Page

Table 4.3: Percent of 1992 High School Seniors Demonstrating Advanced Proficiency in Reading, Math, or Science by Social Class of Student, Controlling for Social Class of School (percent of students receiving subsidized lunch) 68

Table 4.4a: Percent of 1992 High School Students Demonstrating Proficiency at Various Levels of Reading by Student Enrollment and Effort 70

Table 4.4b: Percent of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Mathematics by Student Enrollment and Effort 71

Table 4.4c: Percent of 1992 High School Seniors Demonstrating Proficiency at Science by Student Enrollment and Effort 72

Table 5.1: Percent of 1992 High School Seniors Who Plan to Continue Education Immediately After High School 75

Table 5.2: Percent of 1992 College Bound High School Seniors Planning to Attend Various Types of Postsecondary Institutions 79

Table 5.3: Percent of 1992 High School Seniors Who Are Taking Steps to Continue Education 83

Table 6.1: Educational Expectations of 1992 High School Seniors and Their Parents 88

Table 6.2: Percent of 1992 High School Seniors Most Likely to Study Various Academic Field 92

Table 6.3: Percent of 1992 High School Seniors Most Likely to Pursue Various Types of Non-Academic Training 96

Table 6.4: Percent of 1992 High School Seniors Expecting to Have Various Occupations at Age 30 100

Table 6.5: Percent of 1992 High School Seniors Indicating Level of Education Necessary for the Job They Expect to Have at Age 30 103

Table 7.1: Percent of 1992 High School Seniors Employed During the School Year 106

Table 7.2: Percent of 1992 High School Seniors Participating in Student Government or Volunteer Work 110

Table 7.3: Percent of 1992 High School Seniors Reporting Illicit Drug Use: Marijuana and Cocaine 114

List of Tables (Cont'd)

Page

Table 7.4: Percent of 1992 High School Seniors Reporting Alcohol Use 117

Table 7.5: Percent of 1992 High School Seniors Reporting Various Amounts of Television Viewing 120

List of Figures

Page

Figure 1.1: Percent of 1992 High School Seniors Whose Parents have Completed Various Levels of Education 2

Figure 1.2: Percent of 1992 High School Seniors in Various Racial and Ethnic Groups 4

Figure 1.3: Percent of 1992 High School Seniors Whose Native Language is English by Race/Ethnicity 6

Figure 1.4: Percent of 1992 High School Seniors in Various Racial and Ethnic Groups by Social Class 8

Figure 1.5: Percent of 1992 High School Seniors Attending Various Types of Schools 12

Figure 2.1: Percent of 1992 High School Seniors who Report that Close Friends Feel Various Activities are "Very Important" 30

Figure 3.1: Percent of 1992 High School Seniors Completing Coursework in Various Subjects 44

Figure 4.1: Percent of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Reading Achievement 50

Figure 4.2: Percent of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Mathematics Achievement 52

Figure 4.3: Percent of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Science Achievement 54

Figure 5.1: Percent of 1992 High School Seniors who Consider Various Factors Important in Selecting a College 86

Figure 6.1: Educational Expectations held by 1992 High School Seniors by Gender 90

Figure 6.2: Percent of 1992 High School Seniors Most Likely to Study Various Academic Fields by Gender 94

Figure 6.3: Percent of 1992 High School Seniors Most Likely to Pursue Various Areas of Non-Academic Training by Gender 98

Figure 6.4: Percent of 1992 High School Seniors Expecting to Have Various Occupations at Age 30 by Gender 102

Figure 6.5: Percent of 1992 High School Seniors Indicating Level Education Necessary for the Job they Expect to have at Age 30 by Gender 104

List of Figures (Cont'd)

Page

Figure 7.1: Percent of 1992 High School Seniors Reporting Various Amounts of Television Viewing by Race/Ethnicity 122

Figure 7.2: Percent of 1992 High School Seniors Reporting Various Amounts of Television Viewing by Class Rank 123

Introduction

Design and Objectives of NELS:88

The major features of NELS:88 include:

- the planned integration of student, dropout, parent, teacher, and school studies;
- initial concentration on an eighth-grade cohort to be followed over a ten-year period;
- inclusion of supplementary components (for example, oversamples of Asians, Hispanics, private school students; state augmentations) to support analyses of demographically distinct subgroups;
- sample "freshening" to provide nationally representative sophomore (1990) and senior (1992) cohorts; and
- design linkages to previous longitudinal studies (such as NLS-72 and HS&B) and other current studies (such as the 1992 NAEP mathematics assessment, and the 1990 and 1987 NAEP High School Transcript studies).

Multiple research and policy objectives are addressed through the NELS:88 design. The study is intended to produce a general purpose dataset to develop and evaluate educational policy at all government levels. NELS:88 aims to inform decision makers, education practitioners, and parents about the changes in the operation of the educational system over time and the effects of various elements of the system on the lives of the individuals who pass through it. Specifically, NELS:88 focuses on a number of interrelated policy issues, including:

- students' academic growth over time, and the family, community, school, and classroom factors that promote or inhibit student learning;
- the transition of different types of students from eighth grade to secondary school;
- the influence of ability grouping and differential course-taking opportunities on future educational experiences and outcomes;
- determinants and consequences of dropping out of (and of returning to) the educational system;
- changes in educational practices over time;
- the role of the school in helping students at risk of school failure, and the school experiences and academic performance of language-minority students;
- the transition from school to work; and
- postsecondary access, choice, and persistence.

A detailed description of the NCES National Education Longitudinal Studies program, and of the design and history of NELS:88, is provided in Appendix A of this report.

Analytic Levels: Across-Wave, Within-Wave, and Across Cohort Analyses

NELS:88 was designed to support cross-wave or longitudinal analysis; within-wave or cross-sectional analysis; and trend analysis, based on cross-cohort comparisons of within-wave NELS:88 data with results from earlier studies. In addition, NELS:88 data can be used either descriptively (for example, one can describe *what* changes 1988 eighth graders had undergone by their senior year), or relationally, (for example, one might try to account for *why* certain changes had taken place). A descriptive analysis might tell us how many seniors were enrolled in spring term 1992, how much course work the average senior had completed, or what proportion of different racial/ethnic subgroups were proficient in higher level mathematical operations. *The focus of this report is primarily descriptive.* However, a more sophisticated analysis, which may be undertaken with longitudinal data, might model the process through which some change occurred such as gains in achievement as measured by the NELS:88 cognitive test battery.

In *longitudinal analysis*, whether descriptive or analytic changes from the 1988 baseline are measured 2[2] or 4 years later, or 1990 sophomores may be re-examined two years later. Longitudinal analysis typically involves repeated measures of the same outcome. (For example, test data can be used to measure growth in academic achievement over time; enrollment status may be measured at multiple points to determine dropout rates.) Or, longitudinal analysis may illuminate the manner in which conditions at an earlier time point are predictive of outcomes at a later time point. (For example, one might examine how eighth graders with various "risk factors"--such as coming from a low-income home, having parents who did not finish high school, having a poor attendance record in eighth grade, and so on--fared two years later--for example, what proportion had dropped out, repeated a grade, and so on.)

A second level of analysis is *cross-sectional*, or focused on a single time point. The base year sample provided a representative national cross-section of 1988 eighth graders. Because the longitudinal sample has been "freshened" with 1990 sophomores who were not in eighth grade in the United States in the 1987-1988 school year, it is a representative sample of the nation's spring-term 1990 sophomores. Likewise, for the 1992 round, the NELS:88 sample was freshened to generate a representative sample of the nation's 1992 seniors. This descriptive summary--*A Profile of the American High School Senior in 1992*--illustrates the cross-sectional level of analysis, which, as it were, takes a snapshot at a single point in time. Earlier NCES reports profiled 1988 eighth graders[3] and 1990 sophomores.[4]

---

[2] For illustrations of 1988-1990 longitudinal analysis, see Kaufman, P., and Bradby, D., (1992), *Characteristics of At-Risk Students in NELS:88* (NCES 92-042); and Scott, L.A., Rock, D.A., Pollack, J.M., and Ingels, S.J. (1994) *Two Years Later: Cognitive Gains and School Transitions of NELS:88 Eighth Graders* (NCES).

[3] Hafner, A., Ingels, S.J., Schneider, B., and Stevenson, D.L. (1990). *A Profile of the American Eighth Grader* (NCES 90-458).

[4] Ingels, S.J., Schneider, B., Scott, L.A., and Plank, S.B. (1994). *A Profile of the American High School Sophomore in 1990.* (NCES 95-086).

Finally, by maintaining a degree of comparability in questionnaire and test measures employed, NELS:88 first follow-up results support comparisons with HS&B sophomores of 1980,[5] and NELS:88 1992 senior results may be compared to findings on HS&B and NLS-72 seniors.[6]

Focus of This Report

This report examines the nation's high school seniors in the spring term of the 1991-92 school year. The senior year of high school marks a critical point in the passage of adolescents to adulthood. High school graduation represents the completion of formal schooling and the point of entry into the work force for some individuals, and the point of transition to postsecondary schooling for others. For some, marriage and parenthood have already begun. High school seniors follow different paths: these transition events--completion of schooling, entry into the labor force, and family formation--take place in different sequences and at different times for different individuals. But all seniors find themselves at a crossroad. The decisions they make at this point in their lives will have a lasting impact not only for them, but for society as well.

Earlier in the century, most high school seniors were at the point of transition into the work force, having completed the course of their formal education. Today, about 75 percent plan to continue their education immediately after high school, and nearly 90 percent expect eventually to obtain at least some college training. Whether their plans include further education or the beginning of a career, data gathered at the completion of high school provides a unique vantage point for evaluating the experiences of the past and assessing the promise of the future.

This report examines the background of 1992 high school seniors, the school environments that shaped their educational experiences, the curriculum in which they were enrolled, their academic achievement, their plans and expectations for the future, and their non-academic experiences during this important period of development. *Chapter 1* of this report provides a demographic profile of high school seniors. *Chapter 2* depicts their school and peer environment by recording seniors' perceptions of school and school safety, as well as the values of their peers. *Chapter 3* describes their course and program enrollments. *Chapter 4* examines the tested achievement of 1992 seniors. *Chapter 5* describes their short-term plans--their postsecondary plans, steps they have taken to gain entrance to college, and factors they considered in choosing a postsecondary institution. *Chapter 6* reports on seniors' plans and expectations for the future. Finally, *Chapter 7* describes the senior cohort's experiences outside of school--use of illicit drugs and alcohol, television viewing, jobs, participation in school government, and community volunteer work. Taken together, these seven chapters provide a statistical profile of the American high school senior in 1992.

Clearly, with a data set of this size, it would be impractical to analyze all of the possible pairwise subgroups comparisons in a single report. We have attempted to provide an overview of the 1992 Senior Cohort and hope this sampling of results will prompt interested readers to conduct further research on additional questions.

---

[5] See, for example, Rasinski, K.A., Ingels, S.J., Rock, D.A., and Pollack, J.M. (1993). *America's High School Sophomores: A Ten-Year Comparison, 1980-1990.* (NCES 93-087).

[6] See, for example, Green, P.J., (1993), *High School Seniors Look to the Future, 1972 and 1992*, (NCES 93-473); and Green et al., *Trends Among High School Seniors*, 1972-1992.

In order to streamline the analysis of data and provide a consistent, workable set of comparisons throughout, we have adopted the following procedures, recognizing that this is certainly not the only meaningful way to look at the data. Unless specifically prompted by previous work reported in the text, generally comparisons on variables reported in quartiles or as subgroups based on cutpoints are conducted only as a contrast of the upper and lower quartiles (e.g., socioeconomic status, class rank, test quartiles), or as a contrast of extreme groups (e.g., percent of students receiving free or subsidized lunch).

For non-quantitative variables, a single comparison group was used for all contrasts. For example, comparisons on type of school compare public to all other types; comparisons on race/ethnicity compare all groups to white. Once again, this is in no way meant to imply that these are the only meaningful comparisons, and the tables in the text and appendices provide means and standard errors that will allow the interested reader to conduct further analysis using the approach described in Appendix C. No data or comparisons are represented for American Indians because of the small sample size.

Chapter 1: A Demographic Profile of Seniors

Background Characteristics of High School Seniors

Any discussion of high school achievement or educational aspirations must begin with an examination of the demographic and societal differences that exist between high school students. Many of these background characteristics have a lasting impact on students' performance in high school and on their pursuit of further education.[7] Social class, parents' education, and race have all been demonstrated to have direct effects on achievement and expectations. For nearly 30 years, following the publication of *Equality of Educational Opportunity* by James Coleman and his colleagues,[8] controversy has raged over mechanisms that might be used to diminish the gap between students from advantaged backgrounds and those from disadvantaged backgrounds, majority and minority students. Rather than enter this debate, this chapter will use NELS:88 data to outline social and economic differences that exist between subgroups of high school seniors. This will be followed by an examination of the types of schools these various social and economic groups attend.

Parental educational attainment. There is strong evidence that the educational attainment of parents strongly influences their children's educational choices.[9] It is typical for children to meet or exceed the educational attainment of their parents. Figure 1.1 presents information on the highest level of schooling completed by seniors' parents. Approximately six out of ten seniors (62 percent) have a parent who continued his or her education beyond high school; almost four out of ten seniors (38 percent) come from families with parents who have a high school diploma or less.[10]

---

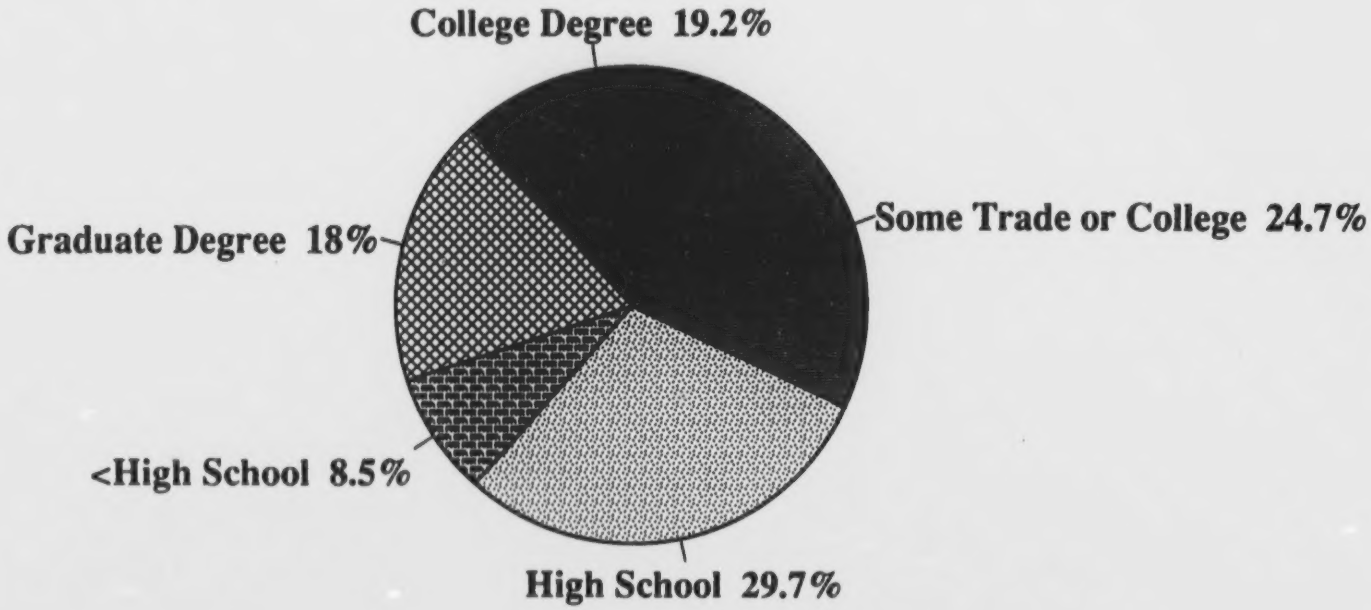
[7] For a description, based on NELS:88 data, of background characteristics that put students "at-risk" of school failure, see Kaufman, P. and Bradby, D. 1992. *Characteristics of At-Risk Students in NELS:88*, Washington, D.C.: National Center for Education Statistics, NCES 92-042.

[8] Coleman, J.S., et al. 1966. *Equality of Educational Opportunity*. Washington, D.C.: U.S. Department of Health Education and Welfare.

[9] The literature on social class and educational attainment is substantial. For a discussion of recent trends in these demographic characteristics see Pallas, A., Natriello, G., and McDill, E. 1989. "The Changing Nature of the Disadvantaged Population: Current Dimensions and Future Trends," *Educational Researcher* (June-July 1989).

[10] See Table 8, U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics. 1993. *Digest of Education Statistics, 1993*. Washington, D.C.: NCES. NCES 93-292.

Figure 1.1: Percent of High School Seniors Whose Parents Have Completed Various Levels of Education



Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Racial and ethnic background. During the past several decades, there has been substantial growth in the number of minority students enrolled in the nations' schools. For example, by some estimates, in Califorina, the most populus state in the nation, "minority" students will comprise the majority of entering students by the year 2010.[11] The distribution of high school seniors for NELS:88 by race or ethnic group is presented in Figure 1.2.

Over a quarter of all 1992 seniors (27 percent) are from racial and ethnic minority groups. Twelve percent are black, 10 percent are Hispanic, about 4 percent are of Asian descent[12] and less than one percent are American Indian. Approximately 73 percent of seniors are white non-Hispanic students, a substantially smaller proportion than a decade earlier, in 1980, when 80 percent of seniors were white.[13]

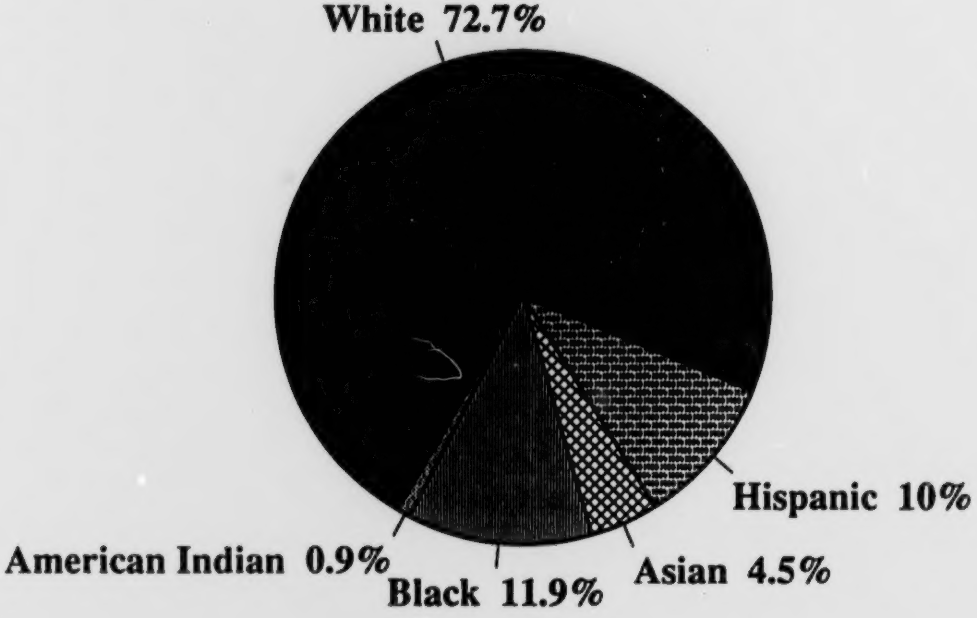
---

[11] King, G. D. (1990). *Educating minority students in California: Descriptive analysis and policy implications.* Sacramento, CA: Joint Publications Office (AOR-0321A).

[12] Asian includes those from the subcontinent (India, Pakistan, etc.), the Pacific Basin, and Pacific Islands.

[13] Data are from National Center for Education Statistics, High School and Beyond, 1982.

Figure 1.2:
Percent of 1992 High School Seniors in Various Racial and Ethnic Groups

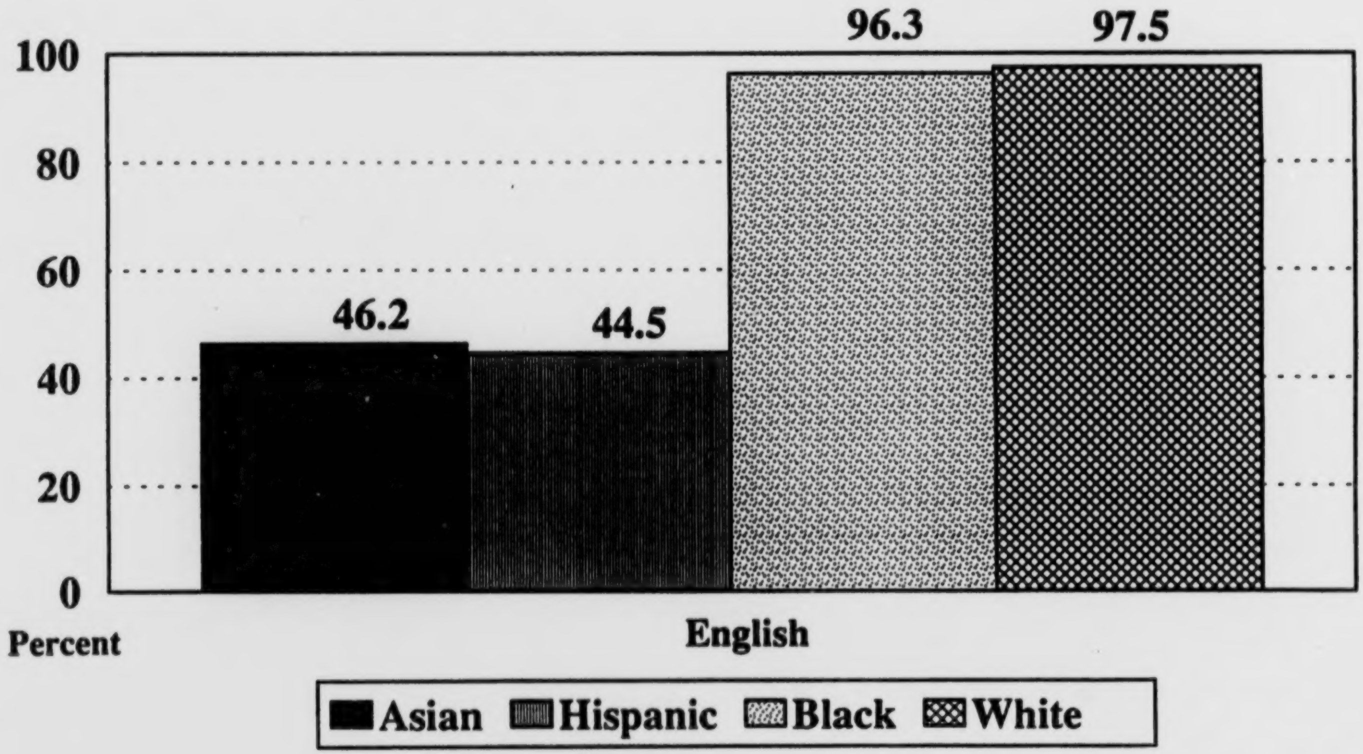


Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Language minority status. Nine out of ten seniors speak English as their native language. Figure 1.3 presents these data.

- English is the native language of nearly all white (98 percent) and black (96 percent) seniors.
- Approximately the same proportion of Asian (46 percent) and Hispanic (44 percent) seniors report English as their native language.

Figure 1.3:
Percent of 1992 High School Seniors Whose Native Language is English by Race/Ethnicity



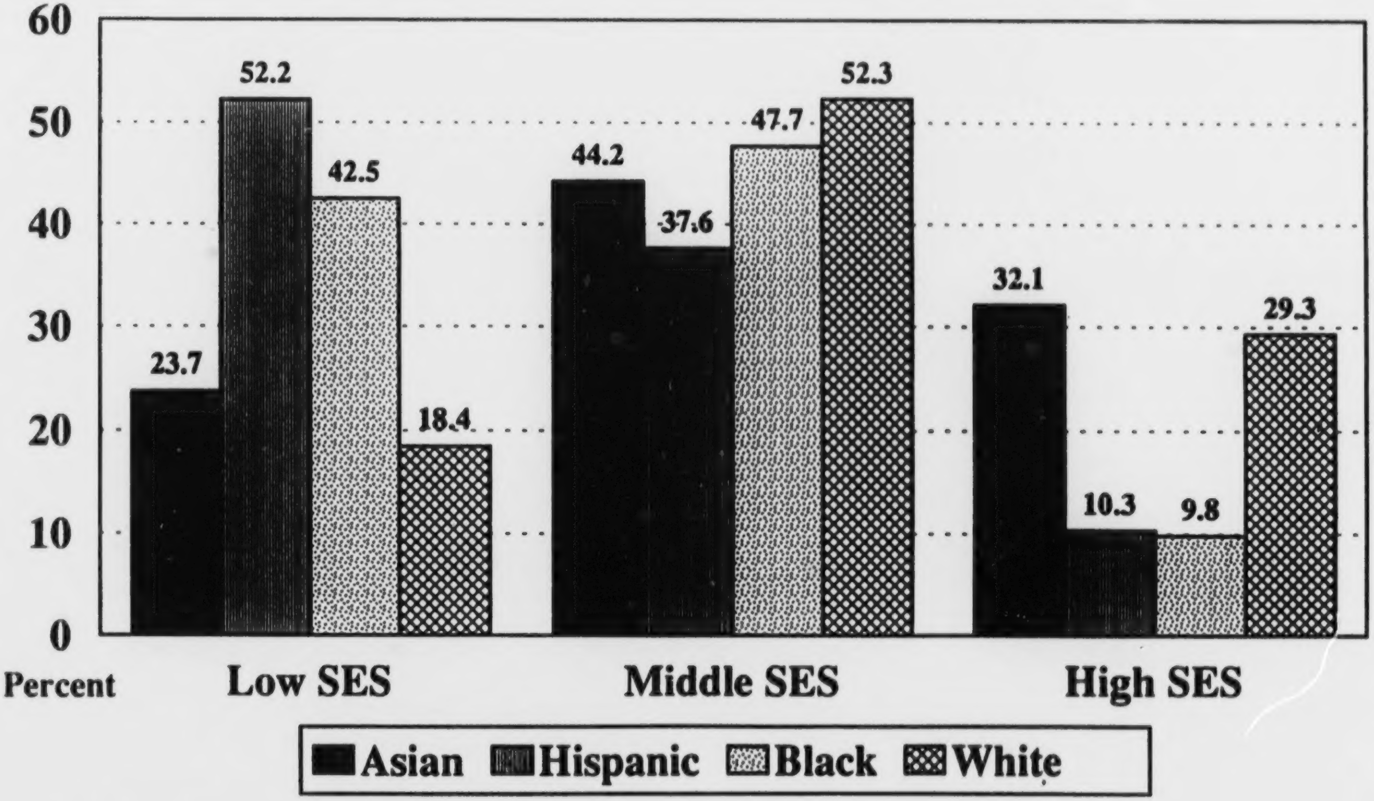
Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Race and social class. Gaps in achievement and attainment between racial groups have been the subject of intense scrutiny over the years. Because race and class covary, it is important to consider race and class simultaneously. Figure 1.4 presents information on socioeconomic status (SES), a measure based on income, education, and occupation, by racial group (described in detail in Appendix B). From these data it is evident that race and class are related:

- Hispanics and blacks are more likely than whites to come from families in the lowest quartile of socioeconomic status. While fewer than 20 percent of white seniors come from the lowest SES quartile, one-half of Hispanics and 43 percent of blacks come from this group.

- Hispanics (10 percent) and blacks (10 percent) are far less likely than whites (29 percent) to come from high SES families.

Figure 1.4:
Percent of 1992 High School Seniors in Various Race and Ethnic Groups by Social Class



Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Distribution of parental education by race. Data in Table 1.1 demonstrate that the level of parental education varies greatly across racial and ethnic groups. Students who are Hispanic are far more likely than white students to have parents who did not complete high school. And, compared with Asian and white seniors, a smaller percentage of black and Hispanic seniors have parents who graduated from college.

- Over one-quarter of Asian seniors (29 percent) come from families in which one or more parents completed graduate school. Approximately 20 percent of white seniors are from families in which one or more parents completed graduate school. Black and Hispanic seniors are far less likely than whites or Asians to have parents who completed graduate school: 10 percent of black and 10 percent of Hispanic seniors have parents who completed graduate school.
- Over 30 percent of Hispanic seniors have parents who did not graduate from high school, while 5 percent of white seniors have parents who did not complete high school.

Distribution of racial and ethnic groups. Racial and ethnic groups are not distributed evenly throughout the United States. As Table 1.2 shows, nearly half of all Hispanic and Asian seniors live in the West, while black seniors disproportionately reside in the South. These figures are consistent with those reported by the U.S. Census Bureau for the same age group.[14]

---

[14] U.S. Bureau of the Census. 1992. *Current Population Survey.*

Table 1.1
Highest Level of Parents' Education for 1992 High School Seniors by Race

	Lt. High School	High School	Some College	College Degree	Graduate Degree
TOTAL	8.4	29.8	24.7	19.2	18.0
RACE/ETHNICITY					
Asian	9.2	21.3	17.0	23.9	28.6
Hispanic	30.6	28.7	20.4	10.0	10.3
Black	10.3	33.0	30.7	15.5	10.5
White	5.3	29.8	24.7	20.7	19.5

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table 1.2
Percent of 1992 High School Seniors in Each Region by Race

	Northeast	Midwest	South	West
TOTAL	19.8	26.0	34.7	19.5
RACE/ETHNICITY				
Asian	19.4	14.6	18.3	47.7
Hispanic	14.3	9.8	32.0	44.0
Black	13.4	13.4	65.7	7.5
White	21.7	31.2	31.1	16.0

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Types of Schools Attended

Academic outcomes vary by the types of schools students attend. Whether this results from self-selection, a superior environment for teaching and learning, or both, students who attend independent private schools with rigorous academic standards, or Catholic schools, demonstrate higher levels of achievement on standardized tests than students in public schools.[15]

Type of school. Differences in achievement between public and private school students are well documented. There is widespread agreement that much of this gap is due to the cost of private education and the resulting selection bias of students into such schools--affluent families are more likely to send their children to private or parochial schools than less affluent parents. More controversial is the contention that, when background characteristics of students are held constant, students in private schools still appear to perform at a higher level than their public school peers.[16] Figure 1.5 presents information on the distribution of seniors at each type of school.

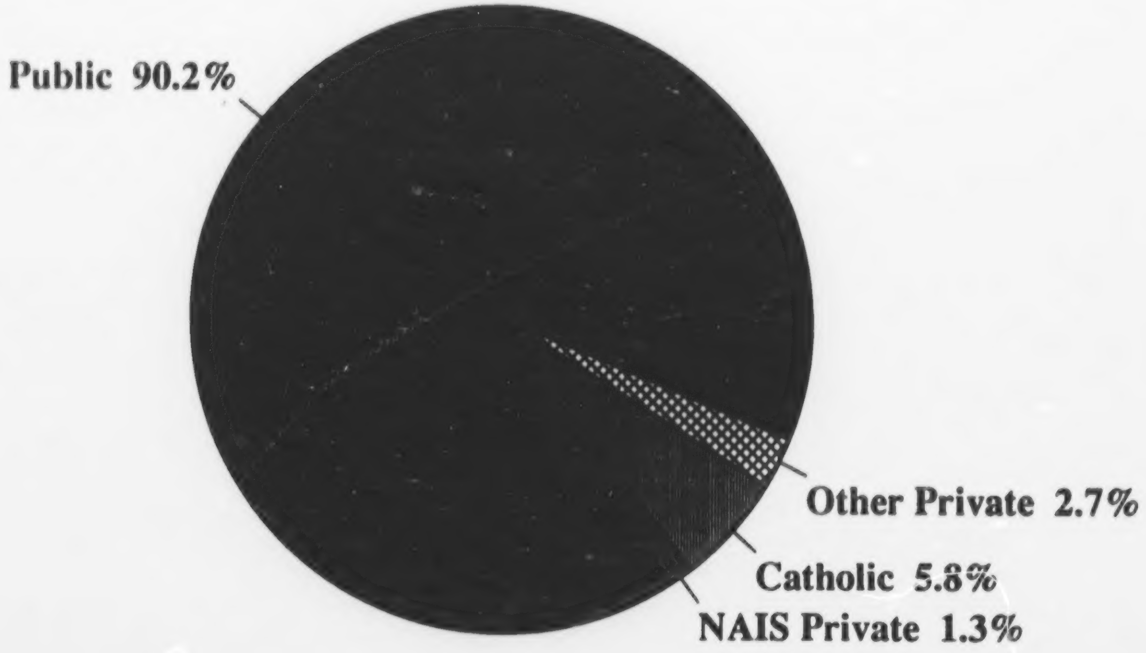
- Nine out of ten seniors (90 percent) attend public schools.
- Approximately 6 percent of seniors attend Catholic schools.
- Four percent of seniors attend private (not including Catholic) schools: 1.3 percent attend schools that are members of the National Association of Independent Schools (NAIS), an organization of schools emphasizing academic preparation for college; 2.7 percent attend other non-NAIS, non-Catholic private schools.

---

[15] Coleman, J.S., Hoffer, T., and Kilgore S. 1982. *High School Achievement: Public, Catholic, and Private Schools Compared.* New York: Basic Books.

[16] Loc. Cit.

**Figure 1.5:
Percent of 1992 High School Seniors
Attending Various Types of Schools**



Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table 1.3 presents information on the types of schools attended by race and social class.

- Nearly 20 percent of seniors in the highest quartile of socioeconomic status attend private or parochial schools, while 2.5 percent of seniors in the lowest quartile of socioeconomic status attend private or parochial schools.

- A larger percentage of black seniors (94 percent) than white seniors (90 percent) attend public schools. Black seniors (one-tenth of a percent) are somewhat less likely than white seniors (3 percent) to attend other private schools.

- In comparison to white seniors (1 percent), a smaller proportion of Hispanic seniors (two-tenths of a percent) attend NAIS private schools.

In addition to school control, several other characteristics of schools are associated with differential student outcomes: the location of the school in an urban, suburban, or rural environment; the socioeconomic status of the students attending school; and the racial and ethnic composition of the school. Table 1.3 also presents information on all these factors by race and social class.

Location. Twenty-eight percent of seniors attend high schools located in urban areas. Approximately 42 percent of seniors attend suburban high schools and 31 percent go to high schools located in rural areas and small towns. Again, there are marked variations in this pattern by race.

- Whites are less likely than others to attend urban high schools. Twenty percent of white seniors attend urban high schools compared to between 46 and 49 percent of all other groups.

- Black seniors are under-represented in suburban schools; 29 percent of black seniors attend suburban high schools compared to 45 percent of whites and 43 percent of Asians.

- Over one-third (35 percent) of white seniors attend schools in rural areas. In contrast, 11 percent of Asians, 20 percent of Hispanics and 22 percent of blacks attend rural schools.

- Forty-nine percent of seniors from high SES families attend suburban schools compared to 31 percent from low SES families. By contrast, 41 percent of low SES seniors attend rural schools, compared to 21 percent of high SES seniors.

All social class groups are equally represented in urban schools. However, seniors from high socioeconomic status families disproportionately attend suburban schools and those from the lowest socioeconomic groups are disproportionately found in rural schools.

Table 1.3
Percent of 1992 High School Seniors Attending Various Classifications of Schools by Race and Social Class

	Type of School				Urbanicity of School			Percent of Student Body Receiving Subsidized Lunch			Minority Enrollment	
	Public	Catholic	NAIS	Other Private	Urban	Suburban	Rural	0-10	11-49	50-100	Lt. 50	50+
TOTAL	90.2	5.8	1.3	2.7	27.7	41.5	30.8	44.0	45.0	11.0	78.4	21.6
RACE/ETHNICITY												
Asian	85.7	7.7	2.6	4.1	46.2	42.7	11.2	49.5	37.2	13.3	65.0	35.0
Hispanic	92.7	6.0	0.2	1.1	47.1	32.5	20.3	21.7	44.2	34.1	32.4	67.6
Black	94.3	5.0	0.6	.1	49.2	28.7	22.1	21.3	55.3	23.4	41.4	58.6
White	89.5	5.9	1.4	3.2	20.5	45.0	34.5	50.4	44.3	5.3	92.5	7.5
SOCIOECONOMIC STATUS												
Low	97.5	2.2	0.0	0.3	28.2	30.6	41.3	22.9	54.7	22.4	65.0	35.0
Middle	91.2	6.4	0.3	2.2	26.0	43.1	30.8	43.9	47.2	8.8	81.2	18.8
High	80.7	8.5	4.5	6.3	29.8	49.4	20.8	64.7	31.5	3.8	87.1	12.9

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Socioeconomic composition of school. As a result of residential housing patterns, schools vary enormously in the proportion of their students who are poor or rich. Previous research suggests that the wealth or poverty of neighborhoods has a direct impact on children's achievement.[17] In addition, the social class composition of schools has often been correlated with student success although the causal relationship has been debated. Arguments have been offered that the association between social class composition and student achievement results from the economic resources of the school, the influence of peer groups, or the instructional process.[18] The one thing that is not debated is that school composition is related to measures of school achievement.

An indicator of the number of economically disadvantaged students within a school is the proportion of students who are receiving free or reduced-price lunches. Overall, 44 percent of seniors attend schools where fewer than 10 percent of students receive reduced-price lunches and another 45 percent attend schools in which between 10 percent and 49 percent receive reduced-price lunches. Just 11 percent of seniors attend schools in which 50 percent or more of the students receive free or reduced-price lunches.

Again, there are substantial differences between racial and ethnic groups.

- Five percent of white seniors attend schools in which the majority of students receive free or reduced-price lunches.
- In contrast to whites, a far greater percentage of Hispanic and black seniors attend schools that have high concentrations of students receiving free or reduced-price lunches. One-third of Hispanic seniors and 23 percent of black seniors attend schools in which the majority of students receive reduced-price lunches.

It should be noted that, even among low SES seniors, the majority (78 percent) attend schools in which less than half of all students receive subsidized lunches. Twenty-two percent of low socioeconomic status seniors attend schools in which more than 50 percent of students receive subsidized lunches.

---

[17] For example, see Brooks-Gunn, J., Duncan, G., Klebenov, and Sealand. 1987. "Do Neighborhoods Influence Child and Adolescent Development?", *American Journal of Sociology*, Volume 99, Number 2, pp 353-393. (September 1993); Wilson, *The Truly Disadvantaged*, Chicago: University of Chicago Press.

[18] A prominent example of research examining social class and achievement in light of the economic resources of schools is Coleman, J.S., et al. 1966. *Equality of Educational Opportunity*. Washington, D.C.: U.S. Department of Health, Education and Welfare. A review of the literature on normative influences and an examination of the importance of instructional processes can be found in Dreeben, R., and Barr, R. 1988. "Classroom Composition and the Design of Instruction", *Sociology of Education, 61*, July, 129-142.

Minority enrollment. School desegregation was a major policy goal in the late 1960s and 1970s. A variety of means (for example, busing and magnet schools) have been used to accomplish this end. However, housing patterns and residential segregation persist to the present, influencing the distribution of students within schools. Table 1.3 presents information about the proportion of seniors attending schools in which over half of all students are members of racial or ethnic minority groups.

- About 8 percent of white seniors attend schools in which over half of the students are from racial or ethnic minority groups.

- Over one-third of Asian seniors (35 percent) attend schools which have high concentrations of minority students.

- Over half of black seniors (59 percent) attend schools in which minority students are the majority.

- Over two-thirds of Hispanic seniors (68 percent) go to schools that are primarily composed of minority students.

- Thirty-five percent of seniors in the lowest socioeconomic status group attend schools in which 50 percent or more of the students come from minority groups; 13 percent of those in the highest socioeconomic status group attend such schools.

Chapter 2: The School and Peer Environment

The school environment sets the stage for student learning. As a nation, we expect all schools to provide quality teaching, fair discipline, and high standards of academic integrity and safety, and the formal organization of the school is structured to achieve these goals. Within that structure lies another informal organization--schools provide a social forum for adolescents and an organizing basis for forming friendships. These friendships are important because peer influence is perhaps more pronounced during this stage of life than during any other stage, and friends' attitudes toward school, grades, studying, and social life often set boundaries for a student's own views.

Together these two forces, the school and peers, shape the context for learning. This chapter explores seniors' perceptions of the school climate, the prevalence of fear and crime within schools, and friends' value systems.

Seniors' Perception of School

Perceptions of teaching. As Table 2.1 demonstrates, over three-quarters of all seniors report that the quality of teaching in their schools is good, that teachers are interested in students, and that grading is fair. There is little variation in these perceptions by gender or region. However, differences between other subgroups do exist.

- Hispanics are somewhat more likely than whites to report that teaching at their school is good (88 percent compared to 85 percent, and blacks are somewhat less likely than whites to believe that students are graded fairly (72 percent compared to 80 percent).

- The largest differences observed occur between students in public and private schools. Five out of six public school seniors, 85 percent, agree with the statement "the teaching is good." But a greater percentage of seniors at NAIS private schools, 99 percent, and Catholic schools, 90 percent, believe the teaching at their school is good.

- Ninety-one percent of seniors enrolled in Catholic schools, 98 percent in NAIS private schools, and 94 percent in other private schools report that teachers are interested in students, compared to 80 percent of seniors in public schools.

- Similarly, 84 percent of seniors at Catholic schools, 95 percent at NAIS private schools, and 90 percent at other private schools indicated that students are graded fairly, compared to 77 percent of the seniors at public schools.

Table 2.1
Percent of 1992 High School Seniors Who Agree with Statements about Teaching and Grading

	Teaching is good at this school	Teachers are interested in students	Students are graded fairly
TOTAL	85.4	81.6	78.3
GENDER			
Male	84.8	81.5	78.6
Female	86.0	81.8	78.0
RACE/ETHNICITY			
Asian	85.5	80.1	77.3
Hispanic	88.5	83.7	77.6
Black	84.1	78.4	71.6
White	85.1	81.9	79.5
SOCIOECONOMIC STATUS			
Low	85.0	80.2	74.6
Medium	84.6	80.6	78.0
High	87.3	85.1	82.7
PARENTS' EDUCATION			
Less than H.S.	87.1	81.5	77.4
High School Graduate/GED	84.6	80.3	75.5
Some College Work	83.7	78.8	77.2
Completed College	87.2	83.5	81.4
Graduate Degree	86.6	85.8	81.5
REGION			
Northeast	85.6	81.2	77.9
Midwest	84.2	81.9	77.0
South	86.2	81.6	79.3
West	85.2	81.5	78.6

Table 2.1
Percent of 1992 High School Seniors Who Agree with Statements about Teaching and Grading (Cont'd)

	Teaching is good at this school	Teachers are interested in students	Students are graded fairly
TESTED PROFICIENCY			
Below basic in at least one area	80.3	76.5	69.6
At least basic in all areas	85.9	82.3	79.4
HIGH SCHOOL PROGRAM[1]			
General	83.5	79.1	76.6
College Preparatory	88.0	85.2	81.6
Vocational	84.6	79.3	75.2
CLASS RANK			
Highest Quarter	88.9	87.6	85.2
Third Quarter	88.3	83.4	80.0
Second Quarter	84.7	79.7	75.9
Lowest Quarter	79.1	74.7	69.2
URBANICITY OF SCHOOL			
Urban	85.5	83.3	77.7
Suburban	85.3	79.5	78.3
Rural	85.4	82.9	78.8
TYPE OF SCHOOL			
Public	84.7	80.4	77.3
Catholic	90.4	91.1	84.1
NAIS Private	99.0	97.9	95.0
Other Private	91.2	94.2	90.4
PERCENT RECEIVING SUBSIDIZED LUNCH			
0-10 percent	88.6	84.2	80.3
11-49 percent	83.6	79.1	76.4
50-100 percent	84.4	83.4	75.7

[1] **This variable represents respondents' self-report of the type of high school program in which they participated.**

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Perceptions of school are also tied to seniors' performance in school, as measured by their class rank reported on their transcript, tested proficiency assessed by a standardized achievement test, and self-reported enrollment in a college preparatory program.

- Seniors who rank in the top quarter of their class are more likely than those in the lowest quarter to believe that teaching is good (89 percent compared to 79 percent), that teachers are interested in students (88 percent compared to 75 percent), and that students are graded fairly (85 percent compared to 69 percent).

- Seniors who demonstrate basic proficiency in reading, math, and science are more likely than those who failed to demonstrate basic proficiency in one or more of those areas to agree that teaching is good, that teachers are interested in students, and that grading is fair.

- Those enrolled in a college preparatory program are more likely than those in general education or vocational programs to report that teaching is good, teachers are interested in students, and that grading is fair.[19]

- Seniors at urban high schools are more likely than seniors at suburban high schools to believe teachers are interested in students (83 percent compared to 80 percent).

- Those attending schools with more than 50 percent of students receiving free or reduced-price lunches are less likely to report that teaching is good than those in schools where fewer than 10 percent of the students receive a free or subsidized lunch (84 percent compared to 89 percent).

Parents' education and socioeconomic status influence seniors' perceptions of teacher interest in students.

- Eighty-six percent of seniors whose parents have graduate degrees perceive that their teachers are interested in the students, compared to 80 percent of seniors whose parents are only high school graduates. These two groups also differed in their perception of the fairness of grading: 82 percent of those whose parents have graduate degrees believe grading is fair compared to 76 percent of seniors with parents who completed only high school.

- Similarly, a significantly greater percentage of seniors from high socioeconomic status families (85 percent) than low SES families (80 percent) report that teachers are interested in students. And 83 percent of high SES seniors report that the grading is fair compared to 75 percent of low SES seniors.

---

[19] This variable represents respondents' self-report of the type of high school program in which they participated.

Perceived Safety at School

One of the national educational goals, instituted in 1989, is that "every school in America will be free of drugs and violence and offer a disciplined environment conducive to learning" by the year 2000. Obviously, the ability of schools to keep children safe is as important as the ability of schools to promote student learning. The climate for learning is also affected by student perceptions of their own safety.

Feeling unsafe at school. The majority of seniors perceive schools to be safe places; approximately 90 percent of seniors report they feel safe at school. However, the crime and violence that occurs on our nation's streets has also spilled over to threaten some students' feelings of safety at school. From Table 2.2, it can be observed that one-in-ten seniors report that they do not feel safe in school. Minorities are more likely than whites to feel unsafe in school.

- Sixteen percent of black and Asian seniors, and 15 percent of Hispanic seniors, report feeling unsafe in school compared to less than 9 percent of white seniors.

- Seven percent of seniors from families in the highest SES quartile, compared to 13 percent of seniors from the lowest SES quartile, feel that their schools are unsafe. Similarly, 7 percent of seniors whose parents have graduate degrees feel unsafe at school, compared to 11 percent of seniors whose parents did not continue their education beyond high school.

Feeling unsafe is more prevalent at public schools than at any other type of school.[20] And, in keeping with the fact that crime rates are highest in urban areas, seniors in urban schools are more likely to feel unsafe than their peers in suburban or rural schools.

- Eleven percent of seniors at public schools say they do not feel safe at school compared to 5 percent of seniors at Catholic schools, 4 percent of seniors at other private schools, and 2 percent of seniors at NAIS private schools.

- Fourteen percent of seniors in urban schools report they do not feel safe in school compared to 10 percent in suburban schools and 8 percent of seniors in rural schools.

Seniors whose native language is not English are more likely than native English-speaking seniors to report feeling unsafe (14 percent compared to 10 percent).

Fights between racial and ethnic groups. Seniors were also asked about fights between different racial and ethnic groups at school. Approximately 23 percent of seniors report that such fights occur often. Seniors whose parents have only a high school diploma are more likely to report interracial fighting occurring often than seniors whose parents have graduate degrees (30 percent compared to 19 percent). However, this percentage fluctuates widely among demographic subgroups.

---

[20] This finding should be interpreted cautiously. As noted in the first chapter, there is greater cultural and racial diversity within public schools than within other schools.

Table 2.2
Percent of 1992 High School Seniors Who Agree with Statements about School Safety

	I don't feel safe at this school	Fights often occur between different racial and ethnic groups	There are many gangs in school
TOTAL	10.4	22.7	16.3
GENDER			
Male	10.8	22.2	16.4
Female	10.1	23.2	16.2
RACE/ETHNICITY			
Asian	15.8	30.5	27.2
Hispanic	14.7	31.9	36.4
Black	16.1	22.2	17.5
White	8.6	20.9	12.5
SOCIOECONOMIC STATUS			
Low	13.0	25.0	21.0
Medium	10.4	23.1	15.6
High	7.4	18.7	12.4
PARENTS' EDUCATION			
Less than H.S.	13.8	30.4	24.2
High School Graduate/GED	11.1	23.0	15.8
Some College Work	10.5	23.1	16.8
Completed College	8.9	18.8	13.3
Graduate Degree	6.6	18.7	12.4
REGION			
Northeast	10.0	20.3	10.2
Midwest	8.7	17.5	12.8
South	12.2	25.6	14.4
West	9.8	26.9	30.4
TESTED PROFICIENCY			
Below basic in at least one area	14.6	30.2	22.6
At least basic in all areas	8.4	20.3	13.7

Table 2.2
Percent of 1992 High School Seniors Who Agree with Statements about School Safety (Cont'd)

	I don't feel safe at this school	Fights often occur between different racial and ethnic groups	There are many gangs in school
NATIVE LANGUAGE			
English	9.8	21.6	14.2
Non-English	14.4	30.0	32.1
HIGH SCHOOL PROGRAM[1]			
General	11.8	23.5	18.1
College Preparatory	8.1	19.6	13.3
Vocational	13.0	28.4	19.2
CLASS RANK			
Highest Quarter	7.5	19.8	14.4
Third Quarter	8.8	19.7	13.3
Second Quarter	10.9	24.0	18.0
Lowest Quarter	12.5	27.9	17.0
URBANICITY OF SCHOOL			
Urban	14.1	25.7	26.9
Suburban	9.7	24.0	15.5
Rural	8.1	18.3	7.9
TYPE OF SCHOOL			
Public	11.1	24.5	17.7
Catholic	4.9	8.3	4.5
NAIS Private	2.4	2.3	1.3
Other Private	4.0	3.4	1.6
PERCENT RECEIVING SUBSIDIZED LUNCH			
10% or less	6.8	18.1	10.0
11% - 49%	12.5	25.9	19.5
50% or more	15.5	28.3	31.1

[1] **This variable represents respondents' self-report of the type of high school program in which they participated.**

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

- Asian and Hispanic seniors are more likely to report that interracial fights often occur at their schools than white or black seniors. Nearly one-third of Asian and of Hispanic seniors report that fights often occur between different racial and ethnic groups at their schools. Twenty-one percent of white and 22 percent of black seniors report interracial fighting often occurring.

- Language minorities are more likely than native English-speaking seniors (30 percent compared to 22 percent) to report inter-group fighting often occurring.

- Seniors who rank in the bottom quarter of their class are more likely than those ranked in the top quarter to report that interracial fights occur often (28 percent compared to 20 percent).

- Twenty-eight percent of seniors from schools in a which a majority of students receive free or reduced-price lunches report that interracial fights occur often, compared to 18 percent of seniors attending schools in which 10 percent or less of the student body receive subsidized lunches.

Interracial fights also vary by the type of school students attend. Racial and ethnic fights are more commonly reported by seniors in public schools (24 percent) than by seniors in Catholic (8 percent) or NAIS (2 percent) or other private schools (3 percent). In short, one-quarter of seniors at public schools, compared to 2 percent of seniors at NAIS private schools, say that fights often occur between different racial and ethnic groups. And finally, seniors attending urban and suburban high schools are more likely to report frequent interracial fights than are seniors attending rural schools (26 percent and 24 percent compared to 18 percent).

Gangs in school. Sixteen percent of seniors, one out of every six, report that there are "many gangs" present in their schools. Large differences exist among demographic subgroups in reports of gang presence in schools.

- Hispanics are almost three times as likely as whites to report that there are many gangs in school. Thirty-six percent of Hispanic seniors report many gangs in schools compared to 12 percent of white seniors. Asian seniors also report the presence of many gangs in approximately twice the proportion (27 percent) of white seniors. There is no significant difference between white and black seniors in the proportion reporting gang presence at school.

- Seniors from higher socioeconomic status families are less likely than seniors from lower socioeconomic backgrounds to report that there are many gangs in their schools (12 percent compared to 21 percent).

- The presence of many gangs is also reported approximately three times as often by seniors in schools in which more than half of all students receive free or reduced-price lunches than by seniors attending schools in which 10 percent or less of the student body receive free or reduced-price lunch (31 percent compared to 10 percent).

- A strong relationship exists between native language and reports of gangs in school. Fourteen percent of native English-speaking seniors report many gangs in their schools compared to 32 percent among non-native English speakers.

Seniors in public schools are more likely than seniors at other schools to report that gangs are present in school.

- Eighteen percent of public school seniors report there are many gangs in school. Less than 5 percent of Catholic school seniors and less than 2 percent of private school seniors report the presence of many gangs.

As might be expected, the existence of gangs in schools varies by the location of the school. Gangs appear to be more prevalent in urban schools than in suburban or rural schools. And a higher percentage of seniors in Western states than other states report that many gangs exist in school.

- Over one-quarter of seniors in urban schools report that there are many gangs in school. Sixteen percent of suburban seniors and 8 percent of rural seniors report that there are many gangs in their schools.

- Gangs appear to be more prevalent in the West than in any other region, perhaps because of the previously mentioned difference in reports of gangs by Asian and Hispanic seniors. Thirty percent of seniors attending school in western states say that many gangs are present in school, more than twice the percentage of seniors from any other region (10 percent in the Northeast, 13 percent in the Midwest and 14 percent in the South).

Victimization in School

The NELS:88 Second Follow-Up Survey included several questions about victimization at school. Table 2.3 presents data on three experiences: having items stolen, being approached to buy drugs, and being threatened with physical harm.

Approximately 31 percent of all seniors state that they have had something stolen from them while at school. Physical violence and the threat of violence are less common--just 15 percent of seniors say someone has threatened to hurt them while at school. About this same proportion of seniors (16 percent), say that someone has offered to sell or give them drugs while in school.

Exposure to the more serious of these offenses at school is more widespread among males than females. Young males are approximately twice as likely as young females to report that someone has offered them drugs (22 percent vs. 10 percent) or threatened to hurt them (20 percent compared to 11 percent).

Threats of physical violence are experienced by members of all racial and ethnic groups. However, Hispanic seniors are more likely than white seniors (21 percent compared to 17 percent) to report being offered drugs, while a significantly smaller proportion of blacks (9 percent) and of Asians (12 percent) report being offered drugs. This is congruent with the fact that drug use is more prevalent among white and Hispanic seniors than among other racial groups (see Chapter 7 of this report). There are no significant differences among racial/ethnic groups in the reported incidence of theft.

The type and location of the school does affect the likelihood that a senior will report one of these three types of experience.

- Threats of physical violence are reported by a higher percentage of public school seniors (16 percent) than among Catholic school seniors (11 percent), and reports of offers of drugs are more prevalent in public (17 percent) than in "other" private schools (2 percent).

- Seniors attending schools in western states are more likely than their peers elsewhere to report being offered drugs (20 percent in the West compared to less than 17 percent elsewhere).

Table 2.3
Percent of 1992 High School Seniors Who Report Being Victimized at School

	I had something stolen from me while at school	Someone offered to sell or give me drugs at school	Someone threatened to hurt me while at school
TOTAL	30.8	16.0	15.2
GENDER			
Male	34.0	21.7	19.7
Female	27.5	10.3	10.6
RACE/ETHNICITY			
Asian	30.4	11.5	13.0
Hispanic	34.3	21.1	16.3
Black	34.4	9.3	15.3
White	29.7	16.6	15.1
SOCIOECONOMIC STATUS			
Low	33.0	14.4	13.8
Medium	29.5	16.9	15.9
High	31.1	15.8	14.8
PARENTS' EDUCATION			
Less than H.S.	31.1	13.1	12.7
High School Graduate/GED	29.8	16.4	14.6
Some College Work	29.7	16.1	15.3
Completed College	31.2	14.9	14.9
Graduate Degree	32.8	18.1	15.4
REGION			
Northeast	29.4	15.7	14.7
Midwest	31.5	16.4	16.3
South	30.5	13.5	14.6
West	31.8	20.4	15.4
TESTED PROFICIENCY			
Below basic in at least one area	36.0	18.0	15.5
At least basic in all areas	29.5	14.8	14.6

Table 2.3
Percent of 1992 High School Seniors Who Report Being Victimized at School (Cont'd)

	I had something stolen from me while at school	Someone offered to sell or give me drugs at school	Someone threatened to hurt me while at school
NATIVE LANGUAGE			
English	30.2	16.1	15.2
Non-English	35.2	14.2	13.0
HIGH SCHOOL PROGRAM[1]			
General	31.2	18.6	16.2
College Preparatory	29.7	13.5	13.7
Vocational	31.7	15.8	16.5
CLASS RANK			
Highest Quarter	27.2	8.4	10.3
Third Quarter	27.5	14.6	12.2
Second Quarter	32.1	20.2	17.5
Lowest Quarter	37.8	27.8	21.8
URBANICITY OF SCHOOL			
Urban	30.1	16.4	15.7
Suburban	30.9	18.7	15.8
Rural	31.5	12.1	14.0
TYPE OF SCHOOL			
Public	30.8	16.7	15.7
Catholic	27.3	12.7	11.0
NAIS Private	42.2	14.7	10.9
Other Private	33.0	2.5	10.3
PERCENT RECEIVING SUBSIDIZED LUNCH			
10% or less	28.7	17.6	13.9
11% - 49%	32.1	15.4	15.6
50% or more	34.8	17.8	18.4

[1] This variable represents respondents' self-report of the type of high school program in which they participated.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

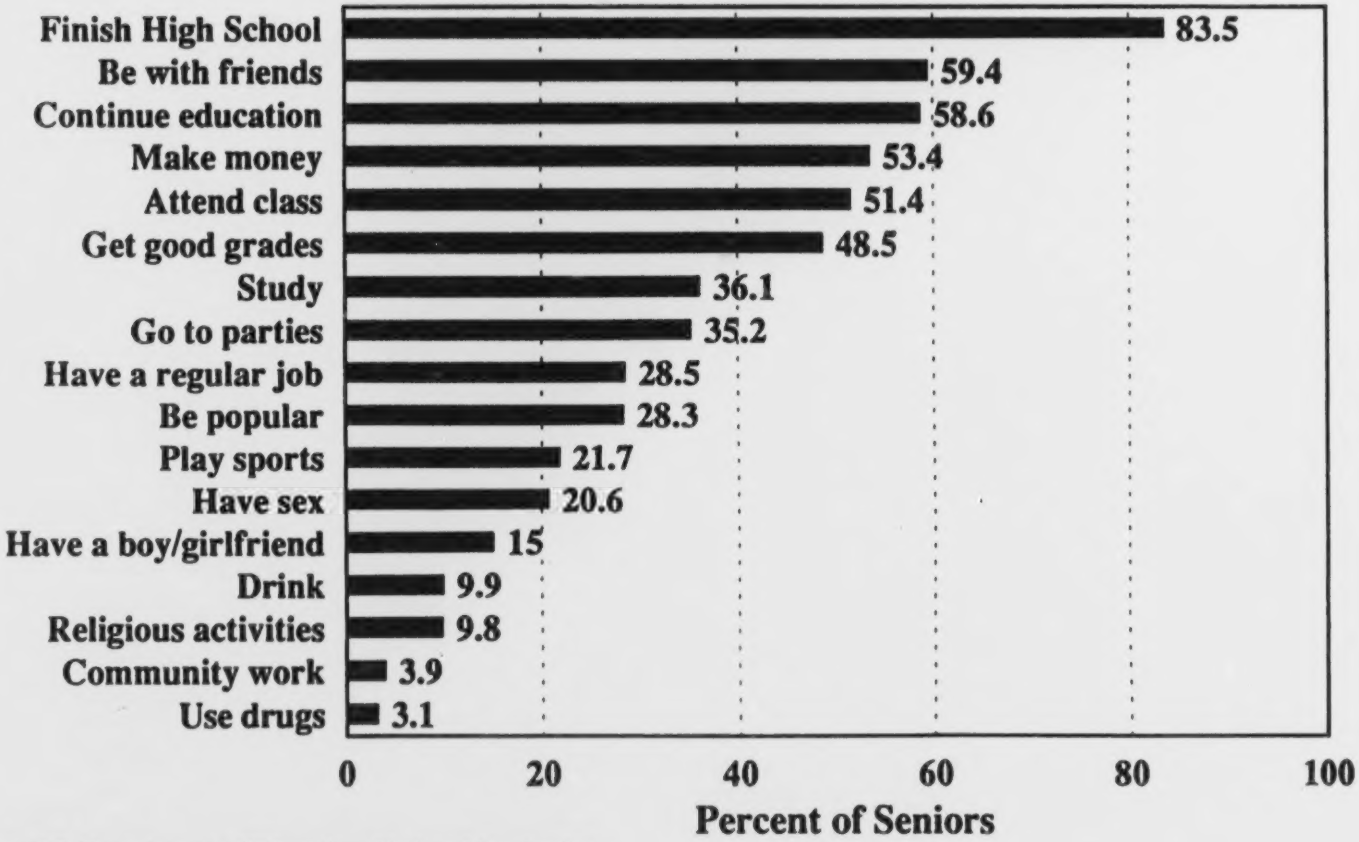
Peer Values

The values held by friends are important because they can affect the choices made by individuals. Adolescence is generally characterized as a stage of life when the individual begins to separate from his or her family of origin and turn toward peers for affirmation and support. The normative beliefs held by friends help define the social world in which adolescents operate.

Figure 2.1 presents information on the activities seniors think are very important to their close friends.

- Eighty-four percent of seniors report that graduation from high school is very important to their close friends.
- Over half of all seniors say that getting together with friends (59 percent), continuing education past high school (59 percent), making money (53 percent), and attending classes regularly (51 percent) are very important to their close friends. Almost as many (48 percent) say that getting good grades is very important.
- Thirty-six percent of seniors believe that studying is very important to friends.
- Religious activities are reported as very important by fewer than 10 percent of seniors.
- Community service work is rated as very important by less than 5 percent of seniors.
- Less than 10 percent of seniors report that using drugs and drinking alcohol are very important to close friends.

**Figure 2.1:
Percent of 1992 High School Seniors Who Report that
Close Friends Feel Various Activities are "Very Important"**



Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

A few of these items merit further scrutiny. The perceived importance of attending class regularly, getting good grades, and studying can be interpreted as being measures of the academic orientation of a student's friendship group. Table 2.4 presents these items for various subgroups.

Among high school seniors, more women than men report their friends value regular class attendance, grades, and studying.

- Gender differences in the importance of studying are marked. While 43 percent of females say their friends think studying is very important, just 29 percent of males believe studying is very important to their close friends.
- Nearly 56 percent of females compared to 41 percent of males believe that their friends value getting good grades.
- Fifty-seven percent of females compared to 45 percent of males report that friends feel regular class attendance is very important.

A number of differences by race and ethnicity are also apparent in Table 2.4. In particular:

- Forty-nine percent of Asians and 43 percent of blacks say that studying is very important, compared to 34 percent of whites who believe their friends feel studying is very important. (These is no significant difference between white and Hispanic seniors.
- Similarly, 59 percent of Asians and 56 percent of blacks feel their close friends think grades are very important compared to 46 percent of whites. Again, there is no significant difference between white and Hispanic seniors.

The emphasis placed on academic activities varies with the location and type of school. Seniors at public schools, compared to those at Catholic schools, are less likely to report that studying is very important to their friends (35 percent vs. 43.7 percent), and are also less likely to think that attending class very important (50.3 percent vs. 59.4 percent). There is no significant difference between public and NAIS or other private schools. Suburban seniors feel less peer pressure than urban seniors with regard to attending class (47 percent compared to 55 percent), getting good grades (46 percent compared to 52 percent), and studying (33 percent compared to 41 percent).

Not surprisingly, the proportion of seniors reporting that these activities are important to their close friends is significantly higher among those in the top quarter of their class as compared to those in the bottom quarter. For example, 57 percent of those in the top quarter of their class say that friends think it is important to get good grades compared to 38 percent of those ranked in the bottom quarter of their high school class.

Table 2.4
Percent of 1992 High School Seniors Who Report that Close Friends Feel Various Academic Activities Are "Very Important"

	Important to attend classes regularly	Important to get good grades	Important to study
TOTAL	51.4	48.5	36.1
GENDER			
Male	45.4	41.1	29.0
Female	57.2	55.7	43.1
RACE/ETHNICITY			
Asian	57.7	59.2	48.9
Hispanic	52.6	49.5	36.7
Black	55.4	55.6	42.7
White	50.2	46.5	34.1
SOCIOECONOMIC STATUS			
Low	50.1	48.5	34.6
Medium	50.4	47.3	35.1
High	55.6	50.4	40.0
PARENTS' EDUCATION			
Less than H.S.	48.6	49.9	32.5
High School Graduate/GED	50.6	46.4	33.7
Some College Work	50.3	45.9	34.0
Completed College	53.9	50.4	40.1
Graduate Degree	55.5	52.2	40.6
REGION			
Northeast	50.2	49.7	35.7
Midwest	52.0	44.8	34.7
South	53.3	51.8	37.5
West	48.0	46.2	35.5
TESTED PROFICIENCY			
Below basic in at least one area	46.5	46.3	35.7
At least basic in all areas	53.6	48.8	35.2

Table 2.4
Percent of 1992 High School Seniors Who Report that Close Friends Feel Various Academic Activities Are "Very Important" (Cont'd)

	Important to attend classes regularly	Important to get good grades	Important to study
NATIVE LANGUAGE			
English	51.2	48.0	35.4
Non-English	55.8	52.7	42.3
HIGH SCHOOL PROGRAM[1]			
General	45.6	43.9	30.3
College Preparatory	58.6	53.6	42.5
Vocational	47.4	47.0	32.4
CLASS RANK			
Highest Quarter	60.9	56.8	42.5
Third Quarter	52.3	49.3	34.4
Second Quarter	50.6	43.4	33.4
Lowest Quarter	43.3	38.3	29.1
URBANICITY OF SCHOOL			
Urban	54.8	52.2	40.7
Suburban	47.2	45.7	33.0
Rural	53.5	48.6	35.7
TYPE OF SCHOOL			
Public	50.3	47.9	35.0
Catholic	59.4	49.5	43.7
NAIS Private	59.0	65.8	45.4
Other Private	61.9	54.7	47.0
PERCENT RECEIVING SUBSIDIZED LUNCH			
10% or Less	52.0	48.7	35.8
11% - 49%	52.1	47.5	33.8
50% or more	51.1	49.0	37.2

[1] **This variable represents respondents' self-report of the type of high school program in which they participated.**

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Chapter 3: Course and Program Enrollments

During the 10 years preceding the graduation of the high school class of 1992, a concerted effort was mounted to strengthen the curriculum taught in high schools. The call for a renewed emphasis on basic courses was outlined by the National Commission on Excellence in Education (NCEE) in 1983. This group recommended that every high school graduate complete four years of English, and three years of social studies, mathematics, and science, and its recommendation was echoed and amplified by others. In 1988, the Secretary of Education recommended to the President and the nation that graduation requirements be extended to include at least two years of a foreign language.

In response to these suggestions, a campaign was mounted to modify the existing high school graduation requirements mandated by the 50 states and District of Columbia. The senior class of 1992 was enrolled in high school during the period following state implementation of more rigorous requirements for high school graduation. For example, by the fall of 1987, the year preceding 1992 seniors' entrance into high school, 88 percent of states had imposed graduation requirements in mathematics compared to only 76 percent of states in 1983.[21] Additionally, many states with existing requirements had increased the number of mathematics courses required for graduation: 59 percent of states required two or more mathematics courses in 1983 compared to 85 percent of states in 1989.

This chapter explores the extent to which this call for a strong national curriculum has been achieved and is reflected in the course-taking patterns of high school seniors. This chapter examines three indicators of curriculum: high school program, the combination of "New Basics" courses taken, and enrollments in specific courses. In addition, this chapter also considers the amount of time seniors spend studying outside of school.

High School Program

Typically, high school programs can be classified into one of three broad types: college preparatory programs, vocational programs, and general education programs. Students' academic experiences can vary considerably depending upon the program in which they are enrolled. In addition to differences in the sequence and content of courses, differences have been noted among programs in terms of teachers' experience, education, and expectations for student performance.[22]

Table 3.1 presents the distribution of seniors by program based on seniors' self-reports.[23] Nearly half of all seniors (48 percent) report they are in a college preparatory track. Most of the remaining seniors (40 percent) report they are in a general high school program. Twelve percent of seniors say they are enrolled in vocational or technical programs.

---

[21] State graduation requirements in mathematics are presented in Appendix Table 2.1 in Division of Research, Evaluation and Dissemination, Directorate for Education and Human Resources, *Indicators of Science and Mathematics Education*, 1992, ed. Larry E. Suter. Washington, DC: National Science Foundation, 1993. NSF 93-95.

[22] Oakes, J., Selvin, M., Karoly, L., Guiton, J. 1992. *Educational Matchmaking: Academic and Vocational Tracking in Comprehensive High Schools*. Berkeley: National Center for Research in Vocational Education.

[23] This variable is based on a questionnaire item which asked the respondents "which of the following best describes your present high school program?" Responses were recoded into these categories: General High School Program, College Preparatory Program, and Vocational/Technical Program. See Appendix B for details.

Previous surveys in 1972 and 1980 indicated that females were less likely than males to be enrolled in a college preparatory program and more likely than males to be enrolled in a vocational high school program. From 1969-1980, a large percentage of women (between 55 and 68 percent) took consumer and/or home economics courses which were classified as vocational education. The gap noted by the earlier surveys has now disappeared,[24] and today a considerably smaller proportion of women is enrolled in vocational education courses.[25] Program placement[26] is also strongly tied to gender and socioeconomic status.

- Males and females are enrolled in college preparatory (47 percent compared to 49 percent), general education (41 percent compared to 39 percent), and vocational programs (13 percent compared to 12 percent) at approximately the same rates.
- Sixty-five percent of seniors from the highest socioeconomic quartile report being in college preparatory programs while 28 percent of those from the lowest socioeconomic quartile report being in a college preparatory program.
- Seniors from the highest SES groups are also less likely than those from the lowest SES group to be enrolled in general education (32 percent compared to 49 percent) or vocational programs (3 percent compared to 23 percent).

Differences between racial and ethnic groups are also pronounced.

- While about half of the white 12th graders are enrolled in a college preparatory program, just 35 percent of Hispanic and 43 percent of black seniors are in that type of program.
- In contrast to white seniors, Hispanic seniors are more likely to be in a general education program (51 percent compared to 39 percent). And black seniors are more likely than white seniors to be enrolled in vocational education (17 percent compared to 11 percent).
- Almost half of all seniors (49 percent) whose native language is English are enrolled in college preparatory programs, compared to 43 percent of non-native English-speaking seniors.

---

[24] Green, P. 1993. *High School Seniors Look to the Future, 1972 and 1992*. Washington, D.C.: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics. NCES 93-473.

[25] Horn, L., Brown, S., & Wilen E. (1992). NCES Vocational Education Electronic Table Library, U.S. Department of Education, National Center for Education Statistics. NCES 92-669.

[26] This variable represents respondents' self-report of the type of high school program in which they participated.

Table 3.1
Percent of 1992 High School Seniors Who Report Enrollment in Different High School Programs

	High School Program[1]		
	General	College Preparatory	Vocational/ Technical
TOTAL	40.0	47.7	12.3
GENDER			
Male	40.9	46.6	12.6
Female	39.1	48.8	12.1
RACE/ETHNICITY			
Asian	34.6	56.2	9.2
Hispanic	50.6	35.4	14.1
Black	40.2	42.8	17.0
White	38.7	49.9	11.4
SOCIOECONOMIC STATUS			
Low	49.1	28.3	22.6
Medium	39.1	48.8	12.2
High	32.1	65.1	2.8
PARENTS' EDUCATION			
Less than H.S.	52.1	24.4	23.5
High School Graduate/GED	44.8	36.2	19.0
Some College Work	38.5	50.2	11.2
Completed College	34.6	59.2	6.3
Graduate Degree	29.4	67.6	3.1
TESTED PROFICIENCY			
Below basic in at least one area	49.4	27.2	23.5
At least basic in all areas	35.1	54.7	10.2
NATIVE LANGUAGE			
English	39.2	48.6	12.2
Non-English	44.3	42.7	13.0
CLASS RANK			
Highest Quarter	20.2	74.0	5.9
Third Quarter	38.0	49.6	12.4
Second Quarter	44.7	38.9	16.3
Lowest Quarter	60.0	23.7	16.3

Table 3.1
Percent of 1992 High School Seniors Who Report Enrollment in Different High School Programs (Cont'd)

	High School Program[1]		
	General	College Preparatory	Vocational/ Technical
PLANS FOR NEXT YEAR			
Four-year College	28.3	67.3	4.4
Two-year Academic	51.9	38.4	9.8
Two-year Vocational/Trade	51.3	20.5	28.2
Will not attend school	52.7	23.5	23.8
Uncertain	55.4	22.0	22.6
URBANICITY OF SCHOOL			
Urban	36.1	52.1	11.8
Suburban	40.7	49.0	10.3
Rural	42.2	42.1	15.7
TYPE OF SCHOOL			
Public	41.6	44.9	13.5
Catholic	21.5	76.3	2.2
NAIS private	9.4	90.6	0.0
Other private	39.9	58.6	1.5
PERCENT RECEIVING SUBSIDIZED LUNCH			
0 - 10%	37.1	55.0	8.0
11 - 49%	39.0	45.8	15.2
50% or more	44.4	39.3	16.3
MINORITY ENROLLMENT			
Less than 50%	38.7	49.6	11.7
50% or more	41.6	44.2	14.2

[1] **This variable represents respondents' self-report of the type of high school program in which they participated.**

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

It may be that student placement is constrained by the programs available at school. For example, many private high schools only offer a college preparatory curriculum. School-level curricular constraints are evident in the data presented in Table 3.1.

- Forty-five percent of seniors in public, 76 percent of seniors in Catholic, and 91 percent of seniors in NAIS private schools are enrolled in college preparatory programs. Seniors enrolled in Catholic and NAIS private schools are more likely than seniors in public schools to report being enrolled in a college preparatory program.

- Forty-two percent of public, 22 percent of Catholic, and 9 percent of NAIS private school seniors are enrolled in general education programs.

- Fourteen percent of seniors in public schools are in a vocational program; 2 percent or less of seniors in other schools are in vocational programs.

Other school characteristics also appear to affect program placement.[27]

- Seniors attending rural high schools are more likely than those attending urban high schools to report enrollment in vocational (16 percent compared to 12 percent) or general education (42 percent compared to 36 percent) programs and are less likely to be in college preparatory programs (42 percent compared to 52 percent).

- Seniors in schools where the majority of students receive free lunches are less likely to be enrolled in college preparatory programs than their counterparts in schools with 10 percent or less receiving a subsidized lunch, (39 percent compared to 55 percent) and they are more likely to be enrolled in vocational programs (16 percent compared to 8 percent).

---

[27] This variable represents respondents' self-report of the type of high school program in which they participated.

Enrollment in New Basics Courses

Students enroll in courses for many different reasons: they are interested in the subject matter, the course is required for graduation, or they feel they need the course to prepare for future educational or career pursuits. Thus, students' course enrollment patterns can be indicative of many things: personal interests, program limitations or requirements, graduation requirements, postsecondary plans, and postsecondary opportunities.

The "New Basics" curriculum first advocated in *A Nation at Risk* consists of a standard set of courses that students should be expected to take. The sequence of New Basics courses examined here reflects these National Commission on Excellence in Education (NCEE) guidelines:

- The "minimum standard" consists of 4 English, 3 social studies, 2 math, and 2 science year-long courses.
- The NCEE recommended level includes the minimum standard plus 1 additional math and 1 additional science course.
- The highest level includes the minimum standard, plus 1 additional math and 1 additional science course, plus two courses in a foreign language, and a half-year course in computer science.

As part of the 1992 round of NELS:88, high school transcripts were collected for a large subsample of NELS:88 seniors. Using these transcripts, it is possible to examine the pattern of courses typically completed by seniors and evaluate whether or not these seniors are meeting the recommended guidelines.[28]

From Table 3.2 it is evident that these standards are not yet universal. Over one-third of seniors have not taken the minimum sequence of courses recommended.[29] And just 16 percent of all seniors have completed the advanced sequence recommended for college entrance which includes foreign languages and computer science.

---

[28] The Tables and Analyses in this report which refer to New Basics Courses Taken are based on all seniors for whom 1992 transcripts were collected. For a complete description of the computation of this variable, see Appendix B.

[29] Two of the reasons seniors failed to meet the New Basics minimum standard is that they either failed to take four English or three social studies courses.

Table 3.2
Percent of 1992 High School Seniors Completing Various Combinations of "New Basics" Courses

	Less than Minimum	Minimum Basic: 4E+3SS+2S+2M[1]	Minimum + 1M+1S[2]	Minimum + 1M+1S+2FL+.5CS[3]
TOTAL	37.4	23.2	23.0	16.4
GENDER				
Male	39.9	21.9	22.8	15.4
Female	34.7	24.6	23.2	17.4
RACE/ETHNICITY				
Asian	32.8	20.8	22.0	24.4
Hispanic	47.7	25.2	15.2	12.0
Black	39.8	25.9	20.1	14.3
White	35.6	22.8	24.6	17.0
SOCIOECONOMIC STATUS				
Low	47.5	27.6	14.6	10.4
Medium	37.0	24.8	22.4	15.8
High	26.6	15.9	33.4	24.1
PARENTS' EDUCATION				
Less than H.S.	47.7	29.5	13.3	9.5
High School Graduate/GED	41.9	27.2	18.3	12.6
Some College Work	36.7	24.6	21.8	16.9
Completed College	32.0	17.2	26.5	24.3
Graduate Degree	25.8	16.7	36.4	21.0
REGION				
Northeast	28.0	15.4	32.7	23.9
Midwest	49.5	19.3	18.2	13.0
South	30.5	25.6	25.4	18.5
West	41.8	31.9	16.2	10.1
TESTED PROFICIENCY				
Below basic in at least one area	52.2	26.4	14.6	6.8
At least basic in all areas	31.6	22.9	26.0	19.5
NATIVE LANGUAGE				
English	36.1	23.4	23.9	16.7
Non-English	45.3	21.4	17.7	15.6

Table 3.2
Percent of 1992 High School Seniors Completing Various Combinations of "New Basics" Courses (Cont'd)

	Less than Minimum	Minimum Basic: 4E+3SS+2S+2M[1]	Minimum + 1M+1S[2]	Minimum + 1M+1S+2FL+.5CS[3]
HIGH SCHOOL PROGRAM				
General	46.0	28.2	16.4	9.4
College Preparatory	25.4	16.4	32.6	25.7
Vocational	51.7	31.5	11.2	5.6
CLASS RANK				
Highest Quarter	23.0	13.2	33.1	30.8
Third Quarter	30.2	24.0	26.4	19.4
Second Quarter	39.4	33.2	17.3	10.1
Lowest Quarter	55.0	30.6	11.1	3.4
PLANS FOR NEXT YEAR				
Four-year College	26.8	16.4	31.8	25.0
Two-year Academic	35.1	32.3	21.2	11.4
Two-year Vocational/ Trade	55.6	26.5	12.4	5.5
Will not attend school	52.1	29.4	11.8	6.6
Uncertain	46.0	34.7	12.5	6.8
URBANICITY OF SCHOOL				
Urban	35.7	24.0	21.9	18.4
Suburban	37.4	22.4	24.3	15.8
Rural	38.7	23.6	22.0	15.6
TYPE OF SCHOOL				
Public	38.6	24.0	22.0	15.4
Catholic	21.4	20.6	25.2	32.8
NAIS Private	33.9	4.8	52.7	8.6
Other Private	26.1	13.2	40.6	20.1
PERCENT RECEIVING SUBSIDIZED LUNCH				
10% or less	34.8	20.9	26.7	17.5
11% - 49%	38.8	24.2	20.5	16.5
50% or more	44.6	25.4	18.9	11.1

[1] Four English, 3 Social Studies, 2 Science, and 2 Math year long courses.

[2] Four English, 3 Social Studies, 3 Science, and 3 Math year long courses.

[3] Four English, 3 Social Studies, 3 Science, 3 Math, 2 Foreign Language year long courses and one-half year of computer science.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Student background characteristics are associated with patterns of course-taking:

- Males are more likely than females to have taken less than the minimum standard combination of courses (40 percent compared to 35 percent).

- Parents' education and socioeconomic status are related to course-taking patterns. Seniors from low-SES families are more likely to take less than the minimum set of courses than those from high-SES families (48 percent compared to 27 percent). Similarly, seniors whose parents have less than a high school diploma (48 percent) or who have only a high school diploma (42 percent) are less likely to have completed the recommended basic sequence of courses than those who have completed college (32 percent) or received graduate degrees (26 percent).

- Racial differences are not sharp. Approximately the same proportion of white (36 percent) and Asian (33 percent) or black (40 percent) seniors fail to take the minimum recommended core courses. However, Hispanic seniors are more likely than white seniors to be below the recommended minimum for course-taking: nearly half (48 percent) of Hispanic seniors have not taken the minimum recommended core courses and only 12 percent have taken the most advanced combination.

Some characteristics of the schools attended by 1992 seniors--the type of school, and the income-level of the student body--are also related to patterns of course work taken by seniors.

- Approximately the same percentage of seniors at public (39 percent) and NAIS private (34 percent) schools fail to complete the minimum set of recommended courses[30]; fewer Catholic school seniors (21 percent) complete less than the recommended minimum set of courses.

- Seniors attending Catholic schools are more likely than seniors at public schools (33 percent compared to 15 percent) to have completed the courses in foreign languages and computer science as well as three courses in math and science.

- No differences exist among seniors in urban, suburban, and rural schools in the pattern of New Basics courses taken.

- Seniors from schools in which over half of all students receive free or reduced-price lunches are less likely to take the most rigorous sequence of recommended courses than those attending schools with fewer than 10 percent of students receiving subsidized lunches (11 percent compared to 18 percent).

---

[30] Over ninety percent of NAIS private school seniors complete two math and two science course. However, some do not have four years of English or 3 years of social studies recorded on their transcripts.

Courses Taken

Student course work and achievement in mathematics and science has caused some concern in recent years. Studies of international achievement in mathematics and science have found that American students' knowledge of science and mathematics lags considerably behind their counterparts in other industrialized countries.[31] One of the determinants of tested achievement is the level of course work taken.

Historically, student participation in advanced science and math courses has been low. A majority of high school seniors enroll in algebra and biology during the early years of high school, but fewer go on to enroll in geometry and advanced algebra or chemistry and physics. In 1982, the following patterns of course-taking were evident:[32]

- In mathematics, 65 percent of 1982 graduates had taken Algebra I, 46 percent had taken geometry, and 35 percent had taken Algebra II.

- In science, three-quarters of 1982 graduates took biology, 31 percent took chemistry, and 14 percent took physics.

Figure 3.1 presents information on the percentage of 1992 high school seniors who have completed at least one course in each subject. From this figure, it is easy to see that while virtually all seniors have taken some math and science, there remain striking differences in the numbers of seniors who have taken introductory and advanced courses within these subject areas.

- While 80 percent of seniors have completed introductory algebra, only 70 percent have completed geometry and slightly over half (53 percent) have completed algebra II. Advanced mathematics courses in pre-calculus and calculus are taken by fewer students, 16 and 10 percent respectively.

- Almost all seniors (93 percent) have taken biology, but far fewer have taken other science courses: about 55 percent have taken chemistry, and one-quarter have taken physics.

- Fifty-eight percent of seniors have taken at least one course in computer science.

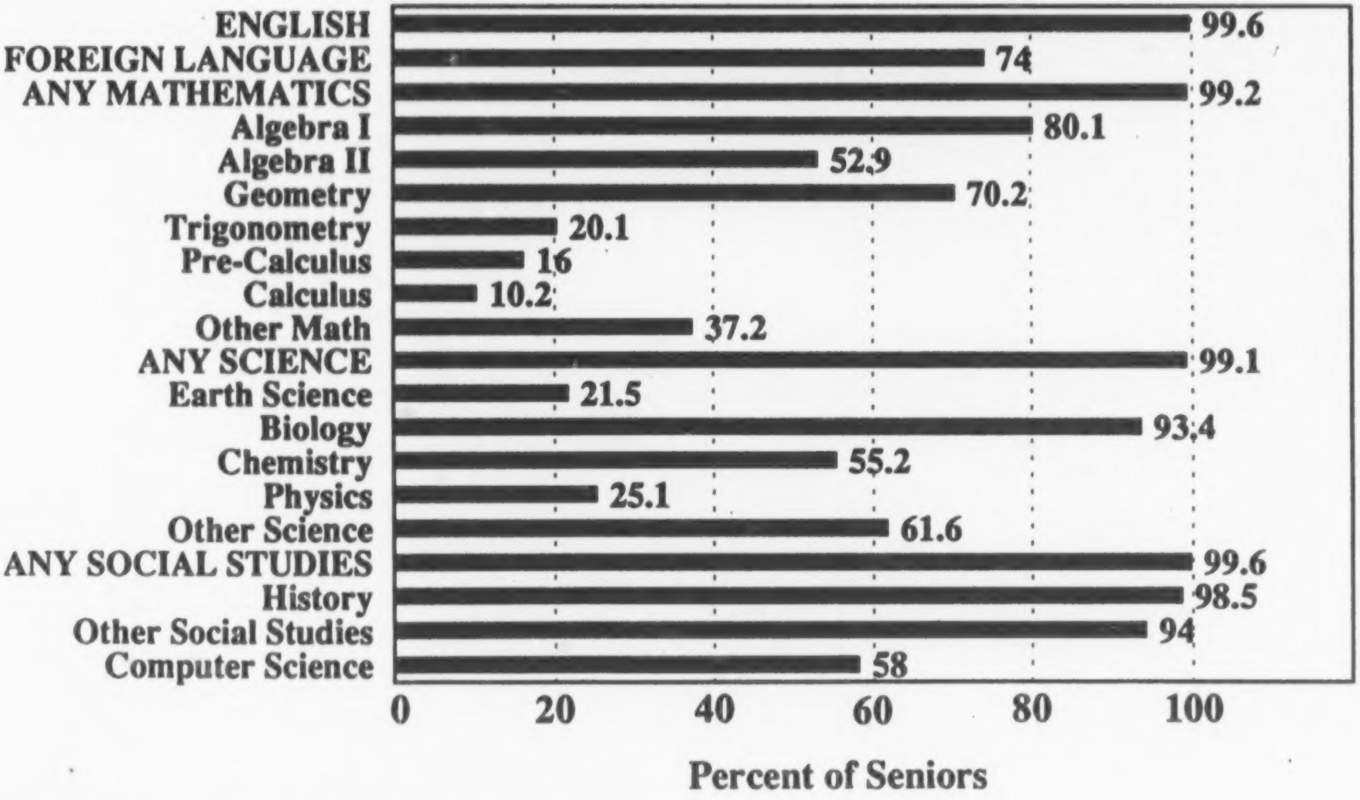
- Nearly three-quarters of all seniors have taken a foreign language class.

---

[31] For cross-national comparisons of the mathematics achievement of children aged 9 and 13 from the International Assessment of Educational Progress, see Lapointe, A.E., Mead, N.A. and Askew, J. M.. 1992. *Learning Mathematics*, Princeton, New Jersey: The Center for the Assessment of Educational Progress, Educational Testing Service. Report No. 22-CAEP-01. Information concerning achievement in science can be found in Lapointe, A. E., Mead, N. A. and Askew, J. M., 1992. *Learning Science*, Princeton, New Jersey: The Center for the Assessment of Educational Progress, Educational Testing Service. Report No. 22-CAEP-02.

[32] These data are based on NCES, High School and Beyond , 1982, as reported in Table 1:14, U.S. Department of Education, National Center for Education Statistics, *The Condition of Education, 1991, Volume 1, Elementary and Secondary Education*. Washington, D.C.: 1991. Note that these numbers are not directly comparable to those reported in Figure 3.1 The 1982 figures are based on a sample of high school graduates; the population examined in this report consists of high school seniors.

Figure 3.1:
Percent of 1992 High School Seniors Completing Coursework in Various Subjects



Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

The figures cited here reflect the progress that has been made in curricular reform. To estimate the magnitude of this change more precisely, it is necessary to redefine the sample somewhat and compare high school graduates in 1992 with high school graduates in 1982. As reported in the *Condition of Education, 1994*, members of the Class of 1992 took far more advanced course work in mathematics and science than their 1982 counterparts.[33] The percentage of graduates who completed four units of English and three units each of social studies, mathematics, and science increased significantly over the decade, from 13 to 47 percent. An increase was also observed for both sexes and all racial and ethnic groups. In addition, the proportion of graduates who complete both algebra II and geometry increased from 29 percent in 1982 to 50 percent in 1992. A similar increase in science is evident; 29 percent completed biology and chemistry in 1982 compared to 54 percent in 1992.[34]

Student Engagement

Learning requires the active participation of the learner, which in turn requires both psychological investment in learning and effort directed toward learning.[35] This student engagement can be gauged in a number of ways including measuring the amount of time spent in doing homework. Hours spent in completing homework outside of school is a clear example of an activity that is directed toward learning and requires active involvement on the part of the learner. While time spent doing homework in school is also important, time spent studying in school is often dictated by the school rather than by the student's own motivation to learn.

Cross-national studies suggest that American 13-year old students spend less time engaged in homework than students in other countries. Students in Korea, Taiwan, Hungary, the Soviet Union, Italy (Emilia-Romagna), Israel, France, Spain, Ireland, and Jordan report spending more time on homework than students in the U.S. Although the link between hours spent doing homework and tested achievement is tenuous, the disparity has focussed attention on the amount of time U.S. students spend doing school work.[36]

Table 3.3 presents data on the amount of time seniors spend each week in doing homework outside of school. Most American seniors (60 percent) report spending less than one hour a day (7 hours per week) doing homework outside of school: approximately 14 percent spend less than one hour per week and another 46 percent say they spend 1-6 hours per week on homework outside of school.

---

[33] Data reported here are from Indicators 24 and 25 in the U.S. Department of Education, National Center for Education Statistics. 1994. *Condition of Education, 1994*. Washington, D.C: NCES (94-149).

[34] More detailed information on trends across years can be found in Green, P., Dugoni, B., and Ingels S.; *Trends Among High School Seniors, 1972-1992*. Washington, D.C.: National Center for Education Statistics (NCES 95-380).

[35] See Newmann, F., Wehlage, G., and Lamborn, S. 1992. "The Significance and Sources of Student Engagement", in *Student Engagement and Achievement in American Second*‑‑*y Schools*. Fred Newmann (ed.). New York: Teachers College Press.

[36] See page 79, Division of Research, Evaluation and Dissemination, Directorate for Education and Human Resources. 1993. *Indicators of Science and Mathematics Education, 1992*, ed. Larry E. Suter. Washington, D.C.: National Science Foundation. NSF 93-95.

Again, demographic characteristics such as social class and parental education are associated with time spent on homework outside of school. Among racial and ethnic groups, Asians outnumber other racial and ethnic groups in reporting spending an hour per day or more on homework.

Perhaps most striking is the relationship between type of school attended and the amount of time spent on homework. Twice the proportion of seniors at NAIS schools, compared to public schools (80 percent compared to 38 percent), report spending an hour a day or more on homework. Part of this may be due to the fact that amount of time spent on homework varies with the type of high school program. One-quarter of seniors in vocational programs and one-third of seniors in general education programs spend at least an hour a day doing homework outside of school, compared to half of all students in college preparatory programs.

Even though seniors in college preparatory programs spend more time engaged in homework than other seniors, the fact remains that only half spend at least an hour each day doing homework outside of school. Similarly, just half of students who plan to attend four-year colleges spend an hour a day on homework outside of school. Chapter 4 explores the impact of student effort on tested achievement.

Table 3.3
Percent of 1992 High School Seniors Who Report Spending Various Amounts of Time Per Week Doing Homework Outside of School

	Less than 1 Hour Per Week	1 - 6 Hours Per Week	7 or More Hours Per Week
TOTAL	14.5	45.7	39.8
GENDER			
Male	18.8	44.8	36.4
Female	10.2	46.6	43.3
RACE/ETHNICITY			
Asian	9.7	37.2	53.1
Hispanic	12.2	48.8	39.0
Black	14.5	50.2	35.2
White	15.1	45.3	39.6
SOCIOECONOMIC STATUS			
Low	18.8	47.4	33.8
Medium	15.6	46.6	37.8
High	8.3	42.3	49.4
PARENTS' EDUCATION			
Less than H.S.	18.7	45.1	36.3
High School Graduate/GED	19.3	46.9	33.8
Some College Work	14.5	46.7	38.8
Completed College	11.2	45.7	43.0
Graduate Degree	7.3	41.2	51.5
REGION			
Northeast	14.7	44.5	40.8
Midwest	16.8	44.2	39.0
South	14.6	47.6	37.7
West	11.0	45.3	43.8
TESTED PROFICIENCY			
Below basic in at least one area	20.9	50.6	28.6
At least basic in all areas	13.5	45.2	41.3
NATIVE LANGUAGE			
English	15.0	46.1	38.9
Non-English	10.3	42.9	46.8

Table 3.3
Percent of 1992 High School Seniors Who Report Spending Various Amounts of Time Per Week Doing Homework Outside of School (Cont'd)

	Less than 1 Hour Per Week	1 - 6 Hours Per Week	7 or More Hours Per Week
HIGH SCHOOL PROGRAM			
General	17.8	48.4	33.8
College Preparatory	8.6	41.2	50.1
Vocational	22.5	52.4	25.1
CLASS RANK			
Highest Quarter	7.0	40.9	52.1
Third Quarter	15.1	47.1	37.8
Second Quarter	18.4	49.9	31.7
Lowest Quarter	21.7	48.4	29.9
PLANS FOR NEXT YEAR			
Four-Year College	8.0	42.8	49.2
Two-Year Academic	13.6	51.0	35.3
Two-Year Vocational/Trade	21.3	48.8	30.0
Will not attend school	24.7	47.5	27.8
Uncertain	25.1	49.9	25.1
URBANICITY OF SCHOOL			
Urban	10.8	46.1	43.1
Suburban	14.7	44.8	40.4
Rural	17.4	46.4	36.2
TYPE OF SCHOOL			
Public	15.2	46.5	38.3
Catholic	9.1	39.0	51.8
NAIS Private	4.0	15.5	80.5
Other Private	8.1	46.1	45.8
PERCENT RECEIVING SUBSIDIZED LUNCH			
10% or less	13.5	44.0	42.4
11% to 49%	14.9	46.6	38.5
50% or more	16.2	48.0	35.8
MINORITY ENROLLMENT			
50% or more	15.1	45.1	39.8
Less than 50%	13.1	47.7	39.2

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Chapter 4: Tested Achievement

The President and the National Governors Association have established national goals for student achievement. One of these goals states that "American students will leave grades 4, 8, and 12 having demonstrated competency in challenging subject matter including English, mathematics, science, history and geography"; another states that "U.S. students will be first in the world in science and mathematics achievement" by the year 2000.

These are ambitious goals. In 1990-1991, U.S. 13 year-olds ranked 13th out of 15 countries in which students were tested. In mathematics, U.S. students ranked next to last, 14th out of the 15 countries participating.[37] Clearly, a substantial effort will be needed to meet the national goal.

An Overview of Proficiency Levels

As part of the NELS:88 Second Follow-Up, seniors were asked to take a series of exams to test their achievement in reading, math, science, and social studies. For each of the first three subjects, proficiency levels are defined. While scores can also be calculated to indicate relative achievement level and gains since last tested, the scores indicating proficiency levels will serve as the focus for this chapter.[38] The primary advantage of examining scores based on proficiency levels is that the skills and content knowledge necessary to meet each proficiency level are clearly defined. (see page 136ff).

Reading. Figure 4.1 presents information on the seniors' proficiency in reading. Proficiency in reading is measured at three levels:

Below Basic:	Cannot comprehend author's main thought.
Basic:	Simple reading comprehension including reproduction of detail and/or the author's main thought.
Intermediate:	Ability to make relatively simple inferences beyond the author's main thought and/or to understand and evaluate relatively abstract concepts.
Advanced:	Ability to make complex inferences or valuative judgments that require piecing together multiple sources of information from the passage.

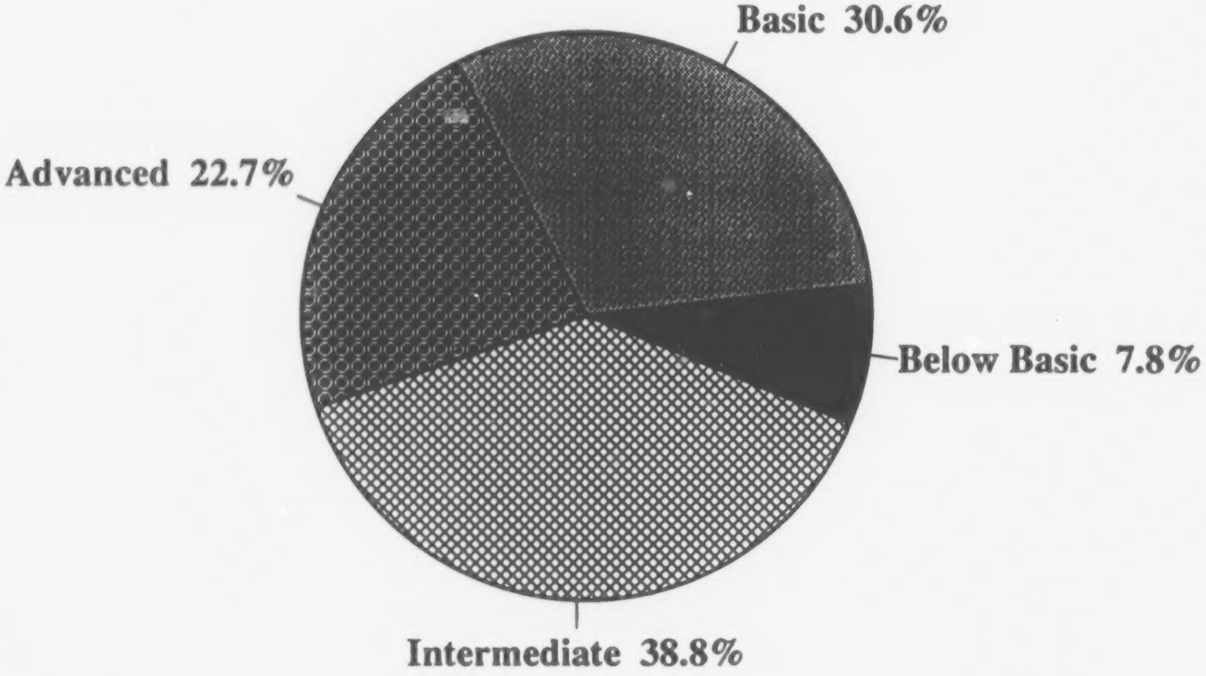
As Figure 4.1 demonstrates, approximately one in twelve seniors (8 percent) cannot comprehend basic written information, and another 31 percent of seniors can grasp the main point of a paragraph but cannot go beyond this simple task. In other words, nearly four out of ten seniors (39 percent) have only basic, or less than basic, reading skills. Less than one-quarter of all seniors (23 percent) can understand and evaluate written arguments and make complex inferences based on the information presented.

---

[37] Lapointe, Mead, and Askew, *Learning Mathematics* and *Learning Science*, *loc. cit.*

[38] Complete information on the construction of test scores available for analysis is provided in Ingels, S., et al., *NELS:88 Student Data File Users Manual, Second Follow-Up*, Washington, D.C.: National Center for Education Statistics, NCES 94-374.

Figure 4.1:
Percent of High School Seniors Demonstrating Proficiency at Various Levels of Reading Achievement



Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

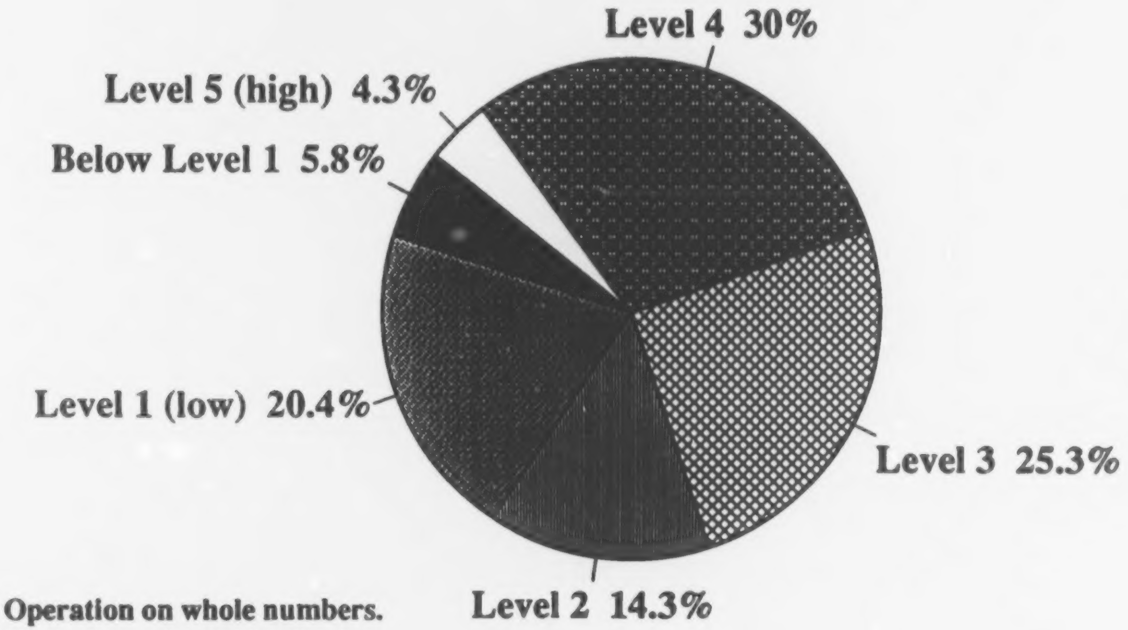
Mathematics. Seniors' exposure to mathematics varies quite dramatically depending on the academic track in which they are enrolled. It is common for seniors pursuing a rigorous college preparatory track to have completed courses in algebra, geometry, trigonometry, and advanced algebra by the time of graduation. In contrast, seniors in general or vocational tracks may take only business or general mathematics. Thus, mathematics proficiency is measured at five levels to capture the wide range of concepts covered in the multitude of different high school mathematics courses:

Below level 1:	Unable to perform simple arithmetic operations.
Level 1 (low):	Simple arithmetical **operations on whole numbers:** essentially single step operations which rely on rote memory.
Level 2:	Simple **operations with decimals,** fractions, powers, and roots.
Level 3:	**Simple problem solving,** requiring an understanding of low level mathematical concepts.
Level 4:	Understanding of **intermediate level mathematical concepts** and/or having the ability to formulate multi-step solutions to word problems.
Level 5 (high):	Proficiency in solving **complex multi-step word problems** and/or the ability to demonstrate knowledge of mathematics material found in advanced mathematics courses.

As the data in Figure 4.2 show, approximately 6 percent of seniors fail to attain basic proficiency (Below level 1) in math. In short, these seniors cannot successfully perform even simple arithmetic computations. Twenty percent of seniors can complete basic computations on whole numbers (level 1), but cannot perform basic calculations with non-integers, such as fractions or decimals; another 14 percent have solid skills in arithmetic (level 2) but are unable to solve simple problems in mathematics. In all, four out of every ten seniors (40 percent) cannot solve basic mathematical problems that require an understanding of low level mathematical concepts.

Almost 60 percent of seniors demonstrate some level of skill in mathematical problem solving: 25 percent can solve only simple problems (level 3), 30 percent can solve multi-step problems (level 4), and 4 percent can solve complex multi-step word problems (level 5).

Figure 4.2:
Percent of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Mathematics Achievement



NOTE:
Level 1 = Operation on whole numbers.
Level 2 = Operation with decimals.
Level 3 = Simple problem solving.
Level 4 = Intermediate math concepts.
Level 5 = Complex multi-step word problems.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

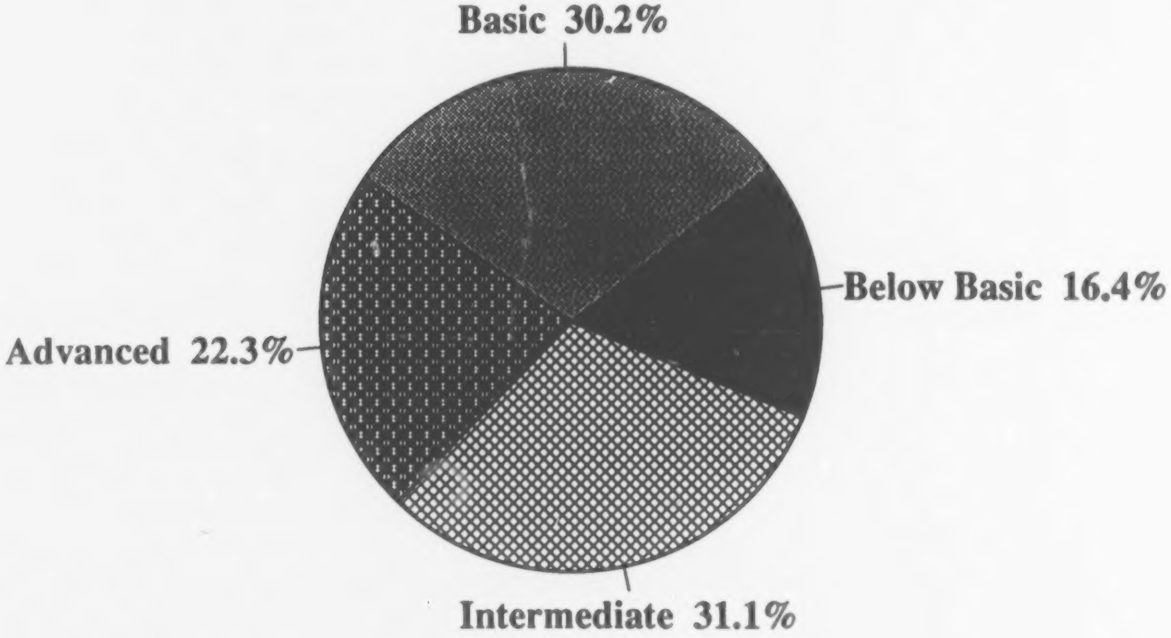
Science. During the past 10 years, concern about student proficiency in science has escalated. The nation's ability to compete effectively in world markets depends in part on the scientific and technological skills of its labor force. Thus, schools have been called upon to renew their emphasis on science. High school science is taught at a wide range of levels, from general science to advanced placement physics. The test used in this study distinguishes scientific knowledge at three levels:

Below Basic:	Does not demonstrate understanding of every day science concepts.
Basic:	Understanding of everyday science concepts; "common knowledge" that can be acquired in everyday life.
Intermediate:	Understanding of fundamental science concepts upon which more complex science knowledge can be built.
Advanced:	Understanding of relatively complex scientific concepts; typically requiring an additional problem solving step.

Sixteen percent of seniors fail to attain the most basic level of science proficiency. If that number is combined with the 30 percent of seniors who possess only "common knowledge" of science, it is apparent that nearly half (47 percent) of all seniors do not understand the fundamental principles of science.

Fifty-three percent of seniors demonstrate an understanding of the basic principles of science: 31 percent demonstrate knowledge of fundamental concepts while another 22 percent demonstrate an understanding of complex scientific concepts.

Figure 4.3:
Percent of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Science Achievement



Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Proficiency Levels and Demographic Characteristics

Demographic factors. Differences in proficiency between subgroups are evident in Tables 4.1a - 4.1c. Some gender differences can be observed.

- Thirty-seven percent of males, compared to 32 percent of females, demonstrate advanced achievement in math.
- A significantly larger proportion of females than males are proficient at the intermediate (41 percent compared to 37 percent) and advanced (26 percent compared to 20 percent) levels of reading.
- A larger percentage of males than females (26 percent compared to 18 percent) perform at the advanced level of science.

Disparity in tested achievement among racial groups is also evident. As noted in other studies, such as the National Assessment of Educational Progress (NAEP), Hispanics and blacks are less likely than others to demonstrate advanced proficiency on standardized achievement tests.

- Blacks and Hispanics are less likely than whites to demonstrate advanced proficiency on the standardized tests of reading (10 percent and 13 percent compared to 26 percent).
- The same pattern is evident in mathematics: 12 percent of blacks and 21 percent of Hispanics demonstrate advanced proficiency compared to 39 percent of white seniors.
- In science, 5 percent of blacks and 11 percent of Hispanics demonstrate advanced science proficiency compared to 26 percent of white seniors.

Parents' education is strongly associated with proficiency in all three subjects. For example, seniors from families in which a parent attended graduate school are four times more likely to score at the advanced level of reading than seniors from families in which neither parent completed high school (39 percent compared to 10 percent). In mathematics, the difference between the two groups is staggering: 59 percent of seniors whose parents attended graduate school are classified in the top two levels of mathematics achievement. Only 11 percent of seniors whose parents failed to complete high school demonstrate this level of proficiency. Clearly, the level of parental education is strongly related to student achievement.

School characteristics. Seniors who attend Catholic or NAIS private schools are more likely than those who attend public school to demonstrate advanced proficiency in reading, math, and science. Seniors attending NAIS private schools perform especially well on these tests. Again, the results in mathematics are striking: 81 percent of seniors in NAIS private schools tested at the highest level of proficiency in math. Only 32 percent of public school seniors, 47 percent of Catholic school seniors, and 42 percent of seniors attending non-NAIS private schools scored at this level.

Table 4.1a
Percent of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Reading by Demographic and School Characteristics

	Below Basic	Basic	Intermediate	Advanced
TOTAL	7.8	30.6	38.8	22.7
GENDER				
Male	9.9	33.0	37.0	20.1
Female	5.7	28.1	40.7	25.5
RACE/ETHNICITY				
Asian	7.8	28.8	36.4	27.1
Hispanic	11.6	45.8	29.4	13.3
Black	14.0	44.8	31.2	10.0
White	6.2	26.4	41.6	25.9
SOCIOECONOMIC STATUS				
Low	12.4	43.5	33.5	10.6
Medium	6.9	31.6	39.9	21.6
High	4.6	16.1	42.0	37.2
PARENTS' EDUCATION				
Less than H.S.	13.4	45.3	31.7	9.6
High School Graduate/GED	10.0	37.2	37.5	15.3
Some College Work	6.0	30.9	42.6	20.4
Completed College	5.7	23.6	38.9	31.9
Graduate Degree	4.4	15.2	41.3	39.1
NATIVE LANGUAGE				
English	7.4	29.2	40.1	23.4
Non-English	10.1	42.2	29.0	18.8
URBANICITY OF SCHOOL				
Urban	7.6	30.6	36.1	25.6
Suburban	8.0	28.0	40.1	23.9
Rural	7.8	33.8	39.4	19.0

Table 4.1a
Percent of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Reading by Demographic and School Characteristics (Cont'd)

	Below Basic	Basic	Intermediate	Advanced
TYPE OF SCHOOL				
Public	8.2	31.7	38.6	21.6
Catholic	2.8	22.4	42.5	32.3
NAIS Private	1.8	8.2	43.0	47.0
Other Private	9.4	23.4	36.3	30.9
PERCENT RECEIVING SUBSIDIZED LUNCH				
10% or less	6.8	24.4	41.2	27.6
11% - 49%	8.2	31.6	40.1	20.0
50% or more	10.7	43.8	31.2	14.2
MINORITY ENROLLMENT				
Less than 50%	6.4	27.3	41.7	24.6
50% or more	12.2	41.4	30.4	16.0

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table 4.1b
Percent of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Mathematics by Demographic and School Characteristics

	Below Level 1	Level 1	Level 2	Level 3	Level 4 or 5
TOTAL	5.8	20.4	14.3	25.3	34.2
GENDER					
Male	5.9	19.1	14.6	24.0	36.5
Female	5.7	21.7	14.0	26.7	31.9
RACE/ETHNICITY					
Asian	3.7	10.6	13.3	27.6	44.8
Hispanic	9.0	33.1	15.1	22.3	20.6
Black	11.4	38.6	19.0	19.0	12.0
White	4.6	16.3	13.5	26.5	39.1
SOCIOECONOMIC STATUS					
Low	10.0	36.1	17.6	21.7	14.6
Medium	5.7	19.4	15.3	27.5	32.2
High	2.0	6.9	9.6	24.4	57.2
PARENTS' EDUCATION					
Less than H.S.	10.1	41.8	18.2	19.0	10.8
High School Graduate/GED	8.8	25.3	18.2	25.3	22.5
Some College	4.7	21.0	14.5	28.9	30.9
Completed College	4.1	10.5	13.4	26.1	45.9
Graduate Degree	1.3	7.0	8.5	23.9	59.4
NATIVE LANGUAGE					
English	5.8	19.6	14.6	25.5	34.6
Non-English	6.1	25.6	12.2	24.3	31.8
URBANICITY OF SCHOOL					
Urban	5.9	20.7	13.8	25.0	34.5
Suburban	5.7	18.1	14.1	24.1	38.0
Rural	5.8	23.0	15.0	27.1	29.2

Table 4.1b
Percent of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Mathematics by Demographic and School Characteristics (Cont'd)

	Below Level 1	Level 1	Level 2	Level 3	Level 4 or 5
TYPE OF SCHOOL					
Public	6.1	21.8	14.7	25.0	32.5
Catholic	2.0	7.7	13.6	29.6	47.2
NAIS Private	1.8	1.5	2.6	12.9	81.3
Other Private	5.6	9.6	10.5	32.3	42.1
PERCENT RECEIVING SUBSIDIZED LUNCH					
10% or less	4.0	15.5	12.8	25.7	42.0
11% - 49%	5.9	22.5	16.5	25.9	29.2
50% or more	9.8	34.7	15.5	21.3	18.7
MINORITY ENROLLMENT					
Less than 50%	4.8	17.8	13.4	26.4	37.5
50% or more	8.0	33.4	15.1	22.0	21.4

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table 4.1c
Percent of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Science by Demographic and School Characteristics

	Below Basic	Basic	Intermediate	Advanced
TOTAL	16.4	30.2	31.1	22.3
GENDER				
Male	14.7	29.3	29.8	26.1
Female	18.1	31.0	32.6	18.3
RACE/ETHNICITY				
Asian	15.3	27.5	29.0	28.2
Hispanic	25.8	36.4	26.7	11.0
Black	34.5	39.1	21.0	5.4
White	12.1	28.1	33.5	26.3
SOCIOECONOMIC STATUS				
Low	28.2	39.5	23.9	8.5
Medium	14.7	32.0	32.4	20.9
High	7.6	17.5	36.0	38.9
PARENTS' EDUCATION				
Less than H.S.	34.0	39.9	20.0	6.2
High School Graduate/GED	19.9	38.7	28.3	13.1
Some College Work	13.8	30.3	34.4	21.4
Completed College	10.4	23.7	34.4	31.4
Graduate Degree	7.0	17.5	35.1	40.4
REGION				
Northeast	12.6	25.9	34.8	26.7
Midwest	14.7	30.0	30.9	24.4
South	20.4	32.0	29.6	18.0
West	15.0	31.4	30.5	23.1
NATIVE LANGUAGE				
English	15.6	29.9	31.6	22.9
Non-English	21.1	32.0	27.7	19.2

Table 4.1c
Percent of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Science by Demographic and School Characteristics (Cont'd)

	Below Basic	Basic	Intermediate	Advanced
NATIVE LANGUAGE				
English	15.6	29.9	31.6	22.9
Non-English	21.1	32.0	27.7	19.2
URBANICITY OF SCHOOL				
Urban	17.3	30.0	30.9	21.7
Suburban	15.5	28.3	31.5	24.7
Rural	16.7	32.6	30.9	19.8
TYPE OF SCHOOL				
Public	17.2	30.9	30.7	21.3
Catholic	9.1	25.0	35.1	30.9
NAIS Private	2.6	10.4	39.0	48.0
Other Private	12.3	26.7	33.7	27.4
PERCENT RECEIVING SUBSIDIZED LUNCH				
10% or less	13.0	25.9	34.7	26.4
11% - 49%	17.4	31.6	31.8	19.2
50% or more	28.2	36.5	26.4	9.0
MINORITY ENROLLMENT				
Less than 50%	13.1	29.2	33.6	24.1
50% or more	29.4	32.9	26.2	11.4

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Seniors attending suburban schools do not perform significantly better than seniors attending urban schools. However, a smaller proportion of seniors at rural schools than urban schools perform at the advanced level of proficiency in reading (19 percent compared to 26 percent) and math (29 percent compared to 34 percent.

School composition is correlated with student performance on these examinations.

- Seniors attending schools in which more than half of the student body qualifies for reduced-price lunches are more likely than those attending schools in which few students receive subsidized lunches to fail to meet minimum levels of proficiency in math (10 percent compared to 4 percent), and science (28 percent compared to 13 percent).

Achievement of advanced proficiency in subject areas also appears to be less common among seniors attending schools with large proportions of students receiving free or subsidized lunch. Half as many seniors in schools with a majority of students receiving subsidized lunch, compared to seniors in schools with 10 percent or fewer students receiving subsidized lunch, demonstrate advanced proficiency. This is true across all three subject areas (in reading, 14 percent compared to 28 percent; in math, 19 percent compared to 42 percent; in science, 9 percent compared to 26 percent).

These findings should be interpreted cautiously. Because of their complexity, it is important to re-examine some of these relationships controlling for social class. In the next section, the relationship between race and achievement will be re-examined controlling for socioeconomic status, along with the relationship between school social class composition and achievement.

Race, Social Class, and Achievement

Many of the disparities in achievement between racial and ethnic groups result from economic and social inequities that are a reality in U.S. society. To make meaningful comparisons of achievement across racial and ethnic groups, it is important to hold social class constant. Tables 4.2a-c present data on the tested achievement of Asians, Hispanics, blacks, and whites controlling for socioeconomic status. From these data, it is apparent that some differences persist even when the effects of social class are held constant.

Within each socioeconomic group, disparities between blacks' and whites' test performance can be observed. These differences are significant and exist in reading, mathematics, and science.

- Blacks are less likely than whites to demonstrate advanced proficiency in science; this is true in the low (2 percent compared to 11 percent), middle (6 percent compared to 24 percent), and high socioeconomic groups (18 percent compared to 40 percent).
- A significant difference in reading proficiency is also evident, but only for blacks and whites in the middle SES group: 9 percent of blacks compared to 24 percent of whites in this group demonstrate advanced proficiency in reading.
- Significant differences exist between Hispanic and white seniors, but only in the high SES group. In reading, among seniors from the high SES group, 22 percent of Hispanics compared to 38 percent of white seniors demonstrate advance proficiency. In science, 23 percent of high-SES Hispanics compared to 40 percent of high-SES whites demonstrate advanced proficiency.[39]

Differences between Asian and white seniors' performance are generally not significant, although high SES Asian seniors are less like than high SES white seniors to fail to demonstrate basic proficiency in mathematics.

---

[39] A relatively small number of cases (145) representing Hispanic seniors from high SES families are available for analysis, limiting interpretation of these data.

Table 4.2a
Percentage of 1992 High School Seniors Proficiency in Reading, by Race, Controlling for SES

	Below Basic	Basic	Intermediate	Advanced
LOW SOCIOECONOMIC STATUS				
Asian	16.3	36.8	28.2	18.8
Hispanic	12.1	50.6	27.9	9.4
Black	19.2	45.5	28.1	7.2
White	9.7	40.1	38.3	11.9
MIDDLE SOCIOECONOMIC STATUS				
Asian	8.0	32.6	39.0	20.4
Hispanic	9.6	44.1	28.7	17.6
Black	10.3	46.9	33.4	9.4
White	6.0	28.3	41.9	23.8
HIGH SOCIOECONOMIC STATUS				
Asian	2.0	19.4	35.1	43.5
Hispanic	9.0	35.0	34.3	21.6
Black	7.8	33.4	34.0	24.9
White	4.4	14.2	43.0	38.4

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table 4.2b
Percentage of 1992 High School Seniors Overall Math Proficiency by Race, Controlling for SES

	Below Basic	Level 1	Level 2	Level 3	Levels 4 or 5
LOW SOCIOECONOMIC STATUS					
Asian	7.1	19.1	18.0	33.1	22.7
Hispanic	11.7	39.7	17.4	18.7	12.5
Black	15.4	45.0	18.5	16.2	4.9
White	7.7	32.5	17.3	24.3	18.3
MIDDLE SOCIOECONOMIC STATUS					
Asian	3.9	11.2	15.2	29.0	40.7
Hispanic	6.7	28.3	13.9	25.6	25.3
Black	9.0	35.9	19.6	19.9	15.6
White	5.2	16.5	14.8	28.6	34.9
HIGH SOCIOECONOMIC STATUS					
Asian	3.9	4.2	7.8	22.2	64.7
Hispanic	4.0	12.6	10.5	29.1	43.8
Black	5.2	21.1	19.3	27.8	26.5
White	1.7	6.0	8.2	24.2	58.9

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table 4.2c
Percentage of 1992 High School Seniors Proficiency in Science by Race, Controlling for SES

	Below Basic	Basic	Intermediate	Advanced
LOW SOCIOECONOMIC STATUS				
Asian	30.4	32.4	24.6	12.6
Hispanic	32.2	38.0	23.4	6.4
Black	42.5	42.1	13.7	1.7
White	21.5	39.6	27.6	11.3
MIDDLE SOCIOECONOMIC STATUS				
Asian	15.5	29.1	34.3	21.1
Hispanic	18.4	36.6	29.8	15.2
Black	31.6	40.9	22.0	5.5
White	11.6	30.6	34.0	23.8
HIGH SOCIOECONOMIC STATUS				
Asian	5.7	18.4	25.5	50.3
Hispanic	12.6	30.2	34.2	23.0
Black	13.2	20.1	48.2	18.4
White	7.2	16.3	36.3	40.1

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Social Class, School Composition, and Achievement

The relationship between the percentage of children receiving reduced-price lunches and achievement is strong because social class and achievement are closely associated. As shown in Table 4.3, if the relationship between achievement and the proportion of the student body receiving free lunches is examined separately for socioeconomic subgroups, it is apparent that the relationship is considerably weakened, but still significant. The socioeconomic composition of the school does affect middle-class seniors.

- In reading, at schools where at least half of all students receive subsidized lunches, 16 percent of seniors demonstrate advanced proficiency, compared to 25 percent of their peers in schools in which 10 percent or less of the student body receive subsidized lunches.
- In mathematics, at schools where at least half of all students are low-income, 19 percent of seniors demonstrate advanced proficiency compared to 35 percent of the seniors at schools in which 10 percent or less of the student body receives subsidized lunches.
- In science, at schools where at least half of all students receive subsidized lunches, 10 percent of seniors demonstrate advanced proficiency, compared to 22 percent of their peers in schools in which 10 percent or less of the student body receive subsidized lunches.

Seniors from the middle socioeconomic quartiles are more likely to demonstrate advanced proficiency if they attend a school in which relatively few students receive free or reduced-price lunches than if they attend a school with a majority of such students.

Table 4.3
Percent of 1992 High School Seniors Demonstrating Advanced Proficiency in Reading, Math, or Science by Social Class of Student, Controlling for Social Class of School (percent of students receiving subsidized lunch)

	0-10 percent Students receive free lunch	11-49 percent Students receive free lunch	50 percent or more students receive free lunch
	Percent Demonstrating Advanced Reading Proficiency		
Socioeconomic Status			
Low	12.0	11.3	9.5
Middle	24.7	20.0	15.9
High	37.3	35.2	36.4
	Percent Demonstrating Advanced Math Proficiency		
Socioeconomic Status			
Low	17.8	13.5	13.7
Middle	35.0	30.7	18.6
High	60.6	50.6	44.3
	Percent Demonstrating Advanced Science Proficiency		
Socioeconomic Status			
Low	9.4	8.0	5.5
Middle	22.2	20.0	10.0
High	38.6	35.7	28.0

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Student Achievement by Student Effort and Enrollment

Student achievement is not a direct consequence of social background or school attendance. Rather, student effort is a major determinant of student achievement. One indicator of student effort is the amount of time spent doing homework outside of school. Also, student achievement in school, as measured by class rank, might be expected to be associated with tested achievement. Additionally, the pattern of courses taken by a student is also known to impact student achievement. This section examines two measures of course-taking: the type of high school program in which the student is enrolled and whether the student completed a New Basics sequence of courses. Tables 4.4a-c presents information on proficiency in reading, math, and science by enrollment and effort.

Class rank and proficiency. Not surprisingly, seniors who rank at the top of their class also demonstrate high levels of proficiency in reading, math, and science. However, it is also notable that graduating in the top quarter is not synonymous with proficiency.

- Sixteen percent of those ranking in the top quarter of their class cannot read above the basic level.
- In math, 12 percent of those in the top quarter are unable to go beyond simple, single-step problems.
- In science, the results indicate that 23 percent of those in the top quarter demonstrate only basic proficiency, or less, in science. Among those in the top half, but not top quarter, of their class, 44 percent demonstrate basic or less than basic proficiency in science.

Thus, even among the "best" seniors, there are some who possess only common-sense knowledge of science.

Homework and proficiency. Seniors who spend more than one hour a day completing homework are more likely than their peers who spend only an hour a week to demonstrate advanced proficiency in reading, mathematics, and science. For example, 46 percent of those who spend at least 7 hours a week doing homework perform at the highest level of mathematics proficiency, while 20 percent of those who spend less than one hour per week perform at that level.

Table 4.4a
Percent of 1992 High School Students Demonstrating Proficiency at Various Levels of Reading by Student Enrollment and Effort

	Below Basic	Basic	Intermediate	Advanced
CLASS RANK				
Highest Quarter	1.9	14.2	40.0	43.9
Third Quarter	5.6	26.7	45.9	21.8
Second Quarter	9.8	39.0	39.6	11.5
Lowest Quarter	13.6	42.3	34.5	9.6
HIGH SCHOOL PROGRAM[1]				
General	8.6	37.6	39.0	14.7
College Preparatory	4.3	20.5	41.4	33.9
Vocational	14.3	41.8	34.7	9.2
TIME SPENT ON HOMEWORK				
Less than one hour	12.0	41.0	36.3	10.7
1-6 hours	7.7	31.8	39.4	21.2
7 or more hours	4.8	24.5	40.2	30.5
PLANS FOR NEXT YEAR				
Four-year College	3.9	20.5	42.8	32.8
Two-year Academic	8.6	38.5	37.6	15.3
Two-year Vocational/Trade	11.9	46.7	31.2	10.1
Will not attend school	13.5	38.6	35.2	12.7
Uncertain	9.7	42.1	38.4	9.8
NEW BASIC COURSES TAKEN[2]				
Less than minimum	11.8	37.0	35.2	16.0
Minimum: 4E+3SS+2S+2M	6.5	33.9	44.6	15.0
Minimum +1M+1S	5.5	23.0	40.3	31.2
Minimum +1M+1S+2FL+.5CS	2.0	17.7	45.2	35.2

[1] This variable represents respondents' self-report of the type of high school program in which they participated.

[2] E = English, SS = Social Studies, S = Science, M = Math, FL = Foreign Language, CS = Computer Science.

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table 4.4b
Percent of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Mathematics by Student Enrollment and Effort

	Below Level 1	Level 1	Level 2	Level 3	Level 4 or 5
CLASS RANK					
Highest Quarter	1.2	4.5	6.1	25.4	62.8
Third Quarter	3.1	16.5	15.2	31.5	33.7
Second Quarter	6.0	25.5	23.0	27.5	18.0
Lowest Quarter	12.3	38.8	20.3	19.2	9.4
HIGH SCHOOL PROGRAM[1]					
General	7.9	28.1	17.0	24.0	23.0
College Preparatory	1.8	8.2	11.6	27.6	50.9
Vocational	12.2	37.2	17.4	22.8	10.4
TIME SPENT ON HOMEWORK					
Less than 1 hour	9.4	27.4	17.3	25.1	20.8
1-6 hours	5.1	23.2	15.0	26.4	30.3
7 or more hours	3.5	13.0	12.5	25.1	46.0
PLANS FOR NEXT YEAR					
Four-year College	1.8	8.5	11.5	27.6	50.7
Two-year Academic	7.9	28.2	17.2	27.3	19.4
Two-year Vocational/Trade	11.2	36.9	20.0	21.1	10.8
Will not attend school	10.4	32.7	17.6	21.6	17.7
Uncertain	10.7	35.8	14.0	24.6	14.9
NEW BASICS COURSES TAKEN[2]					
Less than minimum	9.5	29.6	14.1	21.0	25.8
Minimum: 4E+3SS+2S+2M	5.6	30.0	20.8	24.4	19.2
Minimum +1M+1S	2.0	9.2	13.0	30.8	45.0
Minimum +1M+1S+2FL+.5CS	0.8	5.1	9.5	28.7	55.9

[1] This variable represents respondents' self-report of the type of high school program in which they participated.

[2] E = English, SS = Social Studies, S = Science, M = Math, FL = Foreign Language, CS = Computer Science.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table 4.4c
Percent of 1992 High School Seniors Demonstrating Proficiency at Science by Student Enrollment and Effort

	Below Basic	Basic	Intermediate	Advanced
CLASS RANK				
Highest Quarter	6.0	16.8	34.0	43.1
Third Quarter	14.3	30.0	37.2	18.6
Second Quarter	20.8	35.1	31.8	12.3
Lowest Quarter	25.0	39.9	28.2	6.9
HIGH SCHOOL PROGRAM[1]				
General	19.8	36.3	29.2	14.6
College Preparatory	8.3	22.4	35.2	34.1
Vocational	27.0	40.3	26.7	6.0
TIME SPENT ON HOMEWORK				
Less than one hour	21.2	38.1	25.4	15.3
1-6 hours	17.3	31.2	32.0	19.5
7 or more hours	11.5	25.4	33.4	29.7
PLANS FOR NEXT YEAR				
Four-year College	9.4	22.6	35.0	33.1
Two-year Academic	18.3	35.9	35.2	10.6
Two-year Vocational/Trade	27.3	40.7	23.6	8.4
Will not attend school	23.0	38.0	26.3	12.7
Uncertain	23.0	42.0	23.8	11.2
NEW BASICS COURSES TAKEN[2]				
Less than minimum	23.0	35.1	25.5	16.5
Minimum	18.2	36.2	34.2	11.4
Minimum+1M+1S	10.7	20.1	39.6	29.7
Minimum+1M+1S+2FL+.5CS	7.5	22.0	36.9	33.6

[1] This variable represents respondents' self-report of the type of high school program in which they participated.

[2] E = English, SS = Social Studies, S = Science, M = Math, FL = Foreign Language, CS = Computer Science.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Chapter 5: Short-Term Plans

For most, the end of high school marks the beginning of a transition either to college or to the world of work. The choices young people make during this transition period can profoundly affect their future. This chapter explores how seniors negotiate the transition from high school to work or college by first examining their plans for after high school and then by looking at how they intend to carry out those plans.

Twelfth Graders' Postsecondary Plans

Having a college education has become increasingly important for employment and income.[40] It is not surprising then that roughly three-quarters of all 12th graders plan to continue their education after high school. Table 5.1 presents data on postsecondary plans of high school seniors.

Females are more likely than males to intend to continue on to college or trade school immediately after graduation--78 percent of women compared to 69 percent of men plan to go to a postsecondary institution right after high school graduation.

There are no significant differences between racial and ethnic groups in their plans to attend postsecondary schools immediately after high school graduation.

Seniors' postsecondary plans appear to be linked to the educational background of their parents, type of high school they attend, and their performance in high school.

- There are noticeable differences between seniors with parents of differing levels of education. In fact, the percentage of seniors planning to go on to additional schooling climbs as parental education rises. While 64 percent of those whose parents did not go beyond high school say they will continue their education right away, 88 percent whose parents have graduate degrees say the same thing.

- Seniors' postsecondary plans differ depending on the type of high school they attend. Public school seniors are considerably less likely than seniors in NAIS private, other private schools, or Catholic schools to plan on continuing their education.

- Nearly all seniors (92 percent) who rank in the top quarter of their senior class plan to continue their education after high school. Fifty-seven percent of those in the bottom quarter of their senior classes have the same plans.

- Rural seniors are less likely to intend to continue their education after high school than urban seniors (67 percent compared to 77 percent).

---

[40] For a discussion of the economic rate of return on the individual's investment in higher education, see Murphy, L., and F. Welch. 1989. "Wage Premiums for College Graduates: Recent Growth and Possible Explanations." *Educational Researcher*. Volume 18. For a discussion of the fundamental difference between labor markets for college graduates and sub-baccalaureate labor markets, see Grubb, W. N. 1993. "The Varied Economic Returns to Postsecondary Education: New Evidence from the Class of 1972", *Journal of Human Resources*, 28, pp 365 -382.

- A significantly greater percentage of seniors in college preparatory programs (88 percent) intend to continue their education immediately after high school than seniors in general education (66 percent) or vocational education programs (50 percent).
- Ninety percent of the seniors who have taken 3 math and 3 science courses intend to continue their schooling, compared to 68 percent of those who completed 2 math and 2 science courses.

Table 5.1
Percent of 1992 High School Seniors Who Plan to Continue Education Immediately After High School

	Will Continue Education Immediately After High School	Will Not Continue Education Immediately After High School	Uncertain
TOTAL	73.4	21.9	44.8
GENDER			
Male	69.0	26.1	4.9
Female	77.7	17.7	4.6
RACE/ETHNICITY			
Asian	79.1	16.4	4.6
Hispanic	70.8	21.2	8.0
Black	70.9	24.4	4.6
White	73.9	21.8	4.4
PARENTS' EDUCATION			
Less Than H.S.	54.3	37.1	8.6
High School Graduate/GED	63.6	29.9	6.5
Some College Work	74.9	20.3	4.8
Completed College	84.5	13.8	1.7
Graduate Degree	88.1	9.8	2.2
TESTED PROFICIENCY			
Below basic in at least one area	60.5	32.2	7.3
At least basic in all areas	77.1	18.6	4.4
NATIVE LANGUAGE			
English	73.2	22.2	4.6
Non-English	77.2	16.5	6.3
HIGH SCHOOL PROGRAM[1]			
General	65.8	28.1	6.1
Academic	87.6	10.3	2.0
Vocational	50.3	41.5	8.2
CLASS RANK			
Highest Quarter	92.4	5.6	2.0
Third Quarter	79.5	16.1	4.4
Second Quarter	72.1	21.7	6.2
Lowest Quarter	56.7	32.8	10.5

---

[1] This variable represents respondents' self-report of the type of high school program in which they participated.

Table 5.1
Percent of 1992 High School Seniors Who Plan to Continue Education Immediately After High School (Cont'd)

	Will Continue Education Immediately After High School	Will Not Continue Education Immediately After High School	Uncertain
NEW BASICS COURSES TAKEN[1]			
Less than Minimum	67.1	26.0	6.9
Minimum:4E+3SS+2S+2M	68.4	23.4	8.2
Minimum+1M+1S	89.6	7.5	2.9
Minimum +1M+1S+2FL+.5CS	92.0	5.8	2.2
URBANICITY OF SCHOOL			
Urban	76.6	18.9	4.5
Suburban	75.7	19.8	4.5
Rural	67.4	27.4	5.2
TYPE OF SCHOOL			
Public	71.6	23.4	5.0
Catholic	90.2	7.4	2.4
NAIS private	94.8	3.5	1.7
Other private	84.5	13.4	2.1
PERCENT RECEIVING SUBSIDIZED LUNCH			
10% or less	81.0	14.6	4.3
11% - 49%	74.3	20.2	5.5
50% or more	69.5	20.8	9.6

[1] E = English, SS = Social Studies, S = Science, M = Math, FL = Foreign Language, CS = Computer Science.

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

However, many seniors who appear to lack preparation for further schooling intend to continue their education. As just noted, over half of the seniors who rank in the bottom quarter of their high school classes plan to continue their education after high school. Other indicators of preparation also suggest that many seniors who plan to continue their schooling have limited preparation for doing so.

- Six out of ten seniors who fail to demonstrate basic proficiency in either reading, mathematics, or science intend to continue their education past high school.

- Two-thirds of seniors who have taken less than the minimum standard of New Basics courses anticipate pursuing further education.

As will be seen in the next section, many of these seniors plan to continue their education in four-year colleges and universities.

Types of Postsecondary Schools Seniors are Most Likely to Attend

College enrollments have increased steadily throughout the last century. Just in the past 30 years, enrollments have increased from under five million in the early 1960s to over fourteen million in the early 1990s. Much of this growth has occurred in the community college sector--two-year colleges now enroll over one-third of all college students. During this same period access to college has been broadened with increasing proportions of women and minorities attending college.[41]

Table 5.2 presents information on the types of postsecondary schools college-bound high school seniors plan to attend. Among seniors who plan to continue their education after high school, 62 percent plan to attend a four-year college, 18 percent plan to attend an academic program at a two-year college, 11 percent plan to enroll in a technical program at a two-year college, and 8 percent plan to go to a trade or vocational school. Women are somewhat more likely than men to report they will attend a two-year academic program (20 percent compared to 16 percent), and are somewhat less likely than men to plan to enroll in a trade school (7 percent compared to 10 percent).

There are no differences between black and white seniors in their plans for postsecondary education. Approximately equal proportions of black and white seniors intend to continue their education at a four-year college. However, some ethnic differences are apparent in plans for postsecondary education.

- Nearly three-quarters (73 percent) of college-bound Asian seniors say they will attend a baccalaureate institution compared to 63 percent of white seniors. Asian seniors are also less likely than white seniors to plan to pursue a technical education at a community college (7 percent compared to 11 percent) or trade school (3 percent compared to 8 percent).

- About half (53 percent) of all Hispanic seniors plan to attend a four year college, a significantly lower percentage than white seniors (63 percent). However, a larger percentage of Hispanic than white seniors intend to continue their educations at two-year colleges in academic programs (27 percent compared to 18 percent). Approximately equal percentages of Hispanic and white seniors intend to pursue some type of technical education.

---

[41] See pages 174-175, National Center for Education Statistics. 1993. *Digest of Education Statistics*. Washington, D.C.: U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics. NCES 93-292.

Table 5.2
Percent of 1992 College Bound High School Seniors Planning to Attend Various Types of Postsecondary Institutions

	Four Year	Two Year Academic	Two Year Technical	Trade School
TOTAL	62.0	18.3	11.2	8.4
GENDER				
Male	61.6	16.5	11.8	10.2
Female	62.5	20.0	10.7	6.8
RACE/ETHNICITY				
Asian	73.0	16.4	7.2	3.4
Hispanic	52.5	26.6	12.5	8.4
Black	61.7	16.0	11.6	10.8
White	62.8	17.6	11.3	8.3
PARENTS' EDUCATION				
Less than H.S.	39.3	25.4	20.0	15.3
High School Graduate/GED	48.1	22.7	16.0	13.2
Some College Work	60.0	20.4	12.5	7.2
Completed College	77.5	12.5	6.1	4.0
Graduate Degree	84.0	11.0	3.4	1.6
REGION				
Northeast	71.1	15.2	7.3	6.4
Midwest	64.0	14.3	12.1	9.6
South	60.8	17.4	12.2	9.6
West	52.4	28.4	12.3	6.8
TESTED PROFICIENCY				
Below basic in at least one area	40.9	23.4	18.0	17.7
At least basic in all areas	67.9	16.0	9.8	6.3
NATIVE LANGUAGE				
English	62.2	17.8	11.4	8.6
Non-English	62.0	20.9	9.9	7.2

Table 5.2
Percent of 1992 College Bound High School Seniors Planning to Attend Various Types of Postsecondary Institutions (Cont'd)

	Four Year	Two Year Academic	Two Year Technical	Trade School
HIGH SCHOOL PROGRAM[1]				
General	48.8	25.3	14.7	11.3
College Preparatory	81.3	12.4	4.0	2.2
Vocational	31.6	18.4	28.6	21.4
NEW BASICS COURSES TAKEN[2]				
Less than minimum	49.1	20.6	16.8	13.5
Minimum: 4E+3SS+2S+2M	44.9	25.7	18.4	11.0
Minimum +1M+1S	77.4	14.1	4.9	3.6
Minimum + 1M+1S+2FL+.5CS	84.7	10.2	2.9	2.2
CLASS RANK				
Highest Quarter	84.5	8.4	5.0	2.2
Third Quarter	64.1	17.1	11.4	7.4
Second Quarter	51.6	21.4	14.0	12.9
Lowest Quarter	33.7	30.8	21.0	14.5
URBANICITY OF SCHOOL				
Urban	68.4	17.8	7.9	5.8
Suburban	61.4	19.6	12.1	6.9
Rural	57.1	16.7	13.1	13.1
TYPE OF SCHOOL				
Public	59.8	18.8	12.2	9.2
Catholic	81.1	15.3	2.5	1.2
NAIS Private	95.1	1.4	0.9	2.6
Other Private	75.9	17.7	3.6	2.9
PERCENT RECEIVING SUBSIDIZED LUNCH				
10% or less	66.9	18.3	9.4	5.4
11% to 49%	56.7	19.1	13.6	10.6
50% or more	55.3	15.5	16.6	12.6
MINORITY ENROLLMENT				
50% or more	61.8	17.6	12.2	8.3
Less than 50%	56.6	21.3	11.9	10.2

[1] This variable represents respondents' self-report of the type of high school program in which they participated.

[2] E = English, SS = Social Studies, S = Science, M = Math, FL = Foreign Language, CS = Computer Science.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

As might be expected, parents' education has a strong influence on seniors' choices of postsecondary schools. Seniors whose parents hold college and graduate degrees are far more likely to plan on attending a four-year school than seniors whose parents have only high school diplomas (78 and 84 percent compared to 48 percent). They are also far less likely to plan on attending two-year program of any kind, or a trade school.

The type of high school and high school program are also related to postsecondary plans.

- While 60 percent of college-bound seniors enrolled in public schools plan to go to a four-year college, 81 percent of those in Catholic schools and 95 percent of those in NAIS private plan to attend a four-year college.

- Over 80 percent of college-bound seniors in academic high school programs plan to go to a four-year college.

- In comparison with seniors in urban areas, a smaller percentage of seniors in rural and suburban school districts choose four-year colleges (68 percent compared to 61 percent and 57 percent). Rural seniors are also far more likely than urban seniors to plan to attend technical programs at two-year colleges (13 percent compared to 8 percent) or vocational schools (13 percent compared to 6 percent).

- Seniors attending schools in which the majority of students receive subsidized lunches are more likely than seniors in schools with few low-income students to plan to pursue technical programs in two year colleges (17 percent compared to 9 percent) or trade schools (13 percent compared to 5 percent). They are also less likely to plan to attend a four-year school (55 percent compared to 67 percent).

College preparation and college choice are related. Clearly, seniors who have taken rigorous sequences of New Basics courses and those ranking in the top quarter of their high school class attend four-year colleges at a higher rate than other seniors. However, many of the seniors who plan to attend four-year colleges appear to have only limited preparation.

- Over 40 percent of the seniors who plan to continue their education and lack basic proficiency in one or more of the tested areas plan to go to a four-year college.

- One-third of seniors who rank in the bottom-quarter of their class and intend to continue their education plan on going to a four-year college.

- Almost half of the seniors who have failed to take the minimum sequence of New Basics courses and intend to continue their education plan to do so at a four-year college.

Steps Seniors Have Taken to Gain College Entrance

Clearly, ambitious plans are of little value unless steps are taken to realize those plans. Realizing plans for postsecondary education involves completing a number of preliminary activities: entrance tests must be taken, colleges must be evaluated and chosen, and applications must be filed. This section examines two of the steps seniors take in order to realize their postsecondary goals: taking college aptitude examinations and applying to colleges. Data are presented in Table 5.3

Six-out-of-ten seniors take at least one of the major entrance tests, usually the SAT or the ACT. Approximately the same number (63 percent) proceed to the next step and apply to a college. Striking differences in the social background of those who take entrance examinations and apply to colleges exist. In particular, the percentages of whites (64 percent) and Asians (72 percent) who take entrance tests are much larger than the percentages for Hispanic (44 percent) and black seniors (49 percent). Hispanics are also less likely to have applied to college than white seniors (51 percent compared to 65 percent).

The education level of seniors' parents also appears to be strongly related both to taking college entrance exams and applying to one or more colleges. The general pattern observed is that seniors with more highly educated parents are more likely than others to take an entrance test or apply to college. For example, while three-quarters of seniors whose parents are college graduates report taking a college entrance examination and applying to a college, about half of those whose parents did not continue past high school report completing these steps.

It is not surprising to find that seniors in college preparatory programs and those who attend private schools are much more likely to have taken concrete steps to get into college than public school seniors or those in general and vocational programs. For example, more than 80 percent of all seniors in Catholic schools, and 96 percent of those in NAIS private schools, applied to college, but fewer than 62 percent of all public school seniors applied. And while over 80 percent of seniors in college preparatory programs have taken entrance exams, less than half of seniors in other programs have done so. Finally, seniors planning on attending four-year colleges are far more likely than those planning to attend other types of schools to have taken formal steps to gain admittance to a postsecondary institution.

Table 5.3
Percent of 1992 High School Seniors Who Are Taking Steps to Continue Education

	Took College Entrance Exam	Applied to College
TOTAL	60.0	63.3
GENDER		
Male	55.7	58.0
Female	65.0	68.7
RACE/ETHNICITY		
Asian	71.8	74.3
Hispanic	43.9	51.2
Black	48.6	58.8
White	63.7	65.3
PARENTS' EDUCATION		
Less than H.S.	32.0	40.3
High School Graduate/GED	47.6	51.3
Some College Work	60.3	62.9
Completed College	75.1	78.4
Graduate Degree	84.6	83.4
TESTED PROFICIENCY		
Below basic in at least one area	35.2	44.4
At least basic in all areas	66.9	67.0
NATIVE LANGUAGE		
English	61.5	63.7
Non-English	51.2	61.7
HIGH SCHOOL PROGRAM[1]		
General	48.3	50.9
College Preparatory	81.6	82.4
Vocational	30.7	43.0
NEW BASICS COURSES TAKEN[2]		
Less than minimum	43.1	49.2
Minimum: 4E+3SS+2S+2M	47.0	49.9
Minimum +1M+1S	81.5	77.3
Minimum +1M+1S+2FL+.5CS	86.9	85.4

[1] This variable represents respondents' self-report of the type of high school program in which they participated.

[2] E = English, SS = Social Studies, S = Science, M = Math, FL = Foreign Language, CS = Computer Science.

Table 5.3
Percent of 1992 High School Seniors Who Are Taking Steps to Continue Education (Cont'd)

	Took College Entrance Exam	Applied to College
CLASS RANK		
Highest Quarter	86.8	85.5
Third Quarter	66.1	65.2
Second Quarter	51.1	55.5
Lowest Quarter	28.5	36.3
PLANS FOR NEXT YEAR		
Four-year College	85.6	88.0
Two-year Academic	52.8	57.8
Two-year Vocational/Trade	32.4	50.7
Will not attend school	27.1	22.8
Uncertain	24.9	21.7
URBANICITY OF SCHOOL		
Urban	63.2	67.1
Suburban	61.1	64.2
Rural	56.6	58.8
TYPE OF SCHOOL		
Public	57.8	61.2
Catholic	82.8	81.6
NAIS private	96.1	96.4
Other private	80.2	79.0
PERCENT RECEIVING SUBSIDIZED LUNCH		
10% or less	68.9	67.7
11% - 49%	54.9	59.2
50% or more	44.1	51.4
MINORITY ENROLLMENT		
Less than 50%	62.2	63.2
50% or more	48.8	55.8

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Choosing a College

What issues do seniors consider when deciding what college to attend? In choosing colleges, students' thinking is very much like that of a consumer.[42] Like consumer goods, students evaluate colleges on the basis of their financial cost and on the basis of their perceived potential short and long term benefits. An example of the former would be a safe and friendly learning environment while an example of the latter would be facilitating career goals.

In the Second Follow-Up questionnaire, seniors were asked the importance of 18 items in making their college selections. The items are listed in Figure 5.1 according to the number of seniors who ranked it as "important" or "very important." While college is an enjoyable and satisfying experience in itself, it is also a "stepping stone" over which students pass before beginning a career. This fact appears to weigh heavily in seniors' thinking about the type of college they want to attend.

Two of the three items considered important in choosing a college reflect the relationship between educational and career aspirations. The two items are the availability of degree programs that allow students to get jobs in their chosen fields (considered very important by 66 percent), and the college's record in placing graduates in jobs (cited as important by 53 percent of seniors).

- Two-thirds of all seniors report that the availability of degree programs that allow students to get jobs in their chosen fields is very important.
- Over 60 percent cite the availability of specific courses or curriculum as an important factor in selecting a college.
- Over half of all seniors (53 percent) think that the college's record in job placement is important.

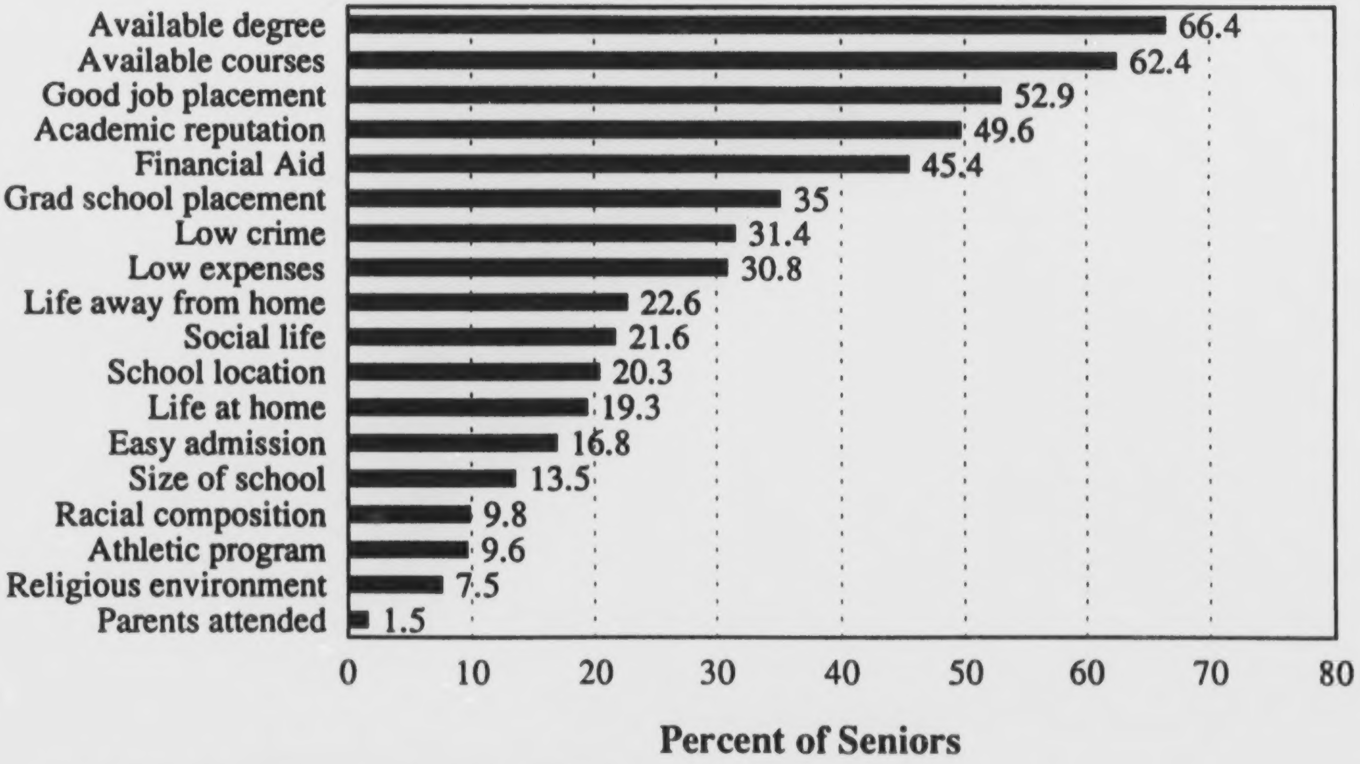
Clearly, high school seniors are seeking college experiences that will help them realize their career goals. At the same time, seniors are also concerned about the academic quality of postsecondary schools.

- Half of all seniors think that the academic reputation of a college is important.
- Thirty-five percent of seniors report that the graduate school placement record is important.

---

[42] Riesman, D. 1980. *On Higher Education: The Academic Enterprise in an Era of Rising Student Consumerism.* San Francisco: Jossey-Bass.

Figure 5.1:
Percent of 1992 High School Seniors
Who Consider Various Factors Important in Selecting a College



Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Personal safety and financial matters are also factors that many high school seniors take into consideration when choosing colleges. Nearly half (45 percent) say that the availability of financial aid, such as school loans, scholarships, or grants make colleges much more attractive to them. Similarly, nearly one-third (31 percent) of seniors report that they seriously consider the cost of tuition, books, and housing. Roughly the same percentage of seniors say that location in a low-crime environment is an important feature of a school.

A number of factors appear to play a significant role in the college decision-making process for a small minority of seniors. Fewer than 10 percent think that a college's ethnic composition, the availability of athletic programs, the existence of a religious environment, or attending the same school as their parents are important factors.

Chapter 6: Plans and Expectations for the Future

This chapter examines seniors' educational and occupational plans and aspirations, and describes seniors' own expectations as well as their perceptions of parental expectations. Finally, the chapter explores how seniors view the connection between their education and their ability to achieve their occupational goals. Overall estimates and breakdowns by gender are discussed in the text of this report. Additional breakdowns by race/ethnicity and by socioeconomic status are presented in Appendix F (Percentages) and Appendix G (Standard Errors). They are not discussed here because the variables in this chapter have so many categories that these additional breakdowns result in rather small sample sizes; they should be used with caution.

Educational Expectations of Seniors and Their Parents

High school students' aspirations for higher education have increased significantly over the past decade, both in terms of expectations for completing a basic college program and for obtaining a graduate degree.[43] Table 6.1 presents data on the level of education high school seniors expect to complete. Overall, approximately 66 percent of seniors expect to complete a college program; 34 percent expect to end their education with a baccalaureate degree and 32 percent expect to complete a graduate degree.

Table 6.1
Educational Expectations of
1992 High School Seniors and Their Parents

Respondent's report of how far in school:	High School or Less	Some College	College Degree	Graduate Degree	Don't Know
Father wants respondent to go	5.0	15.6	39.6	30.8	9.0
Mother wants respondent to go	4.5	16.5	40.0	31.8	7.2
Respondent thinks he/she will get	5.0	23.9	34.2	31.5	5.4

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

---

[43] Rasinski, K. A., & Ingels, S. J. 1993. *America's High School Sophomores: A Ten Year Comparison.* Washington, D.C.: U.S. Department of Education. NCES 93-087.

Parental expectations and encouragement are key factors in children's successful achievement of academic goals.[44] To assess the relationship between parental expectations and seniors' own expectations, seniors in this study were asked to identify the highest level of education their parents expect them to attain.

- A significantly higher percentage of seniors report that their parents expect them to finish a college program than report that they themselves expect to obtain a four or five year college degree.

- A significantly larger percentage of seniors think that their fathers, compared to their mothers, are uncertain about their academic future (9 percent compared to 7 percent).

As can be seen in Figure 6.1, when educational expectations are examined by gender, some important differences emerge.

- While approximately equal proportions of male and female seniors expect to end their education with a college degree, significantly more females expect to obtain a graduate degree. This is consistent with trends in females' educational ambitions observed since 1972.[45]

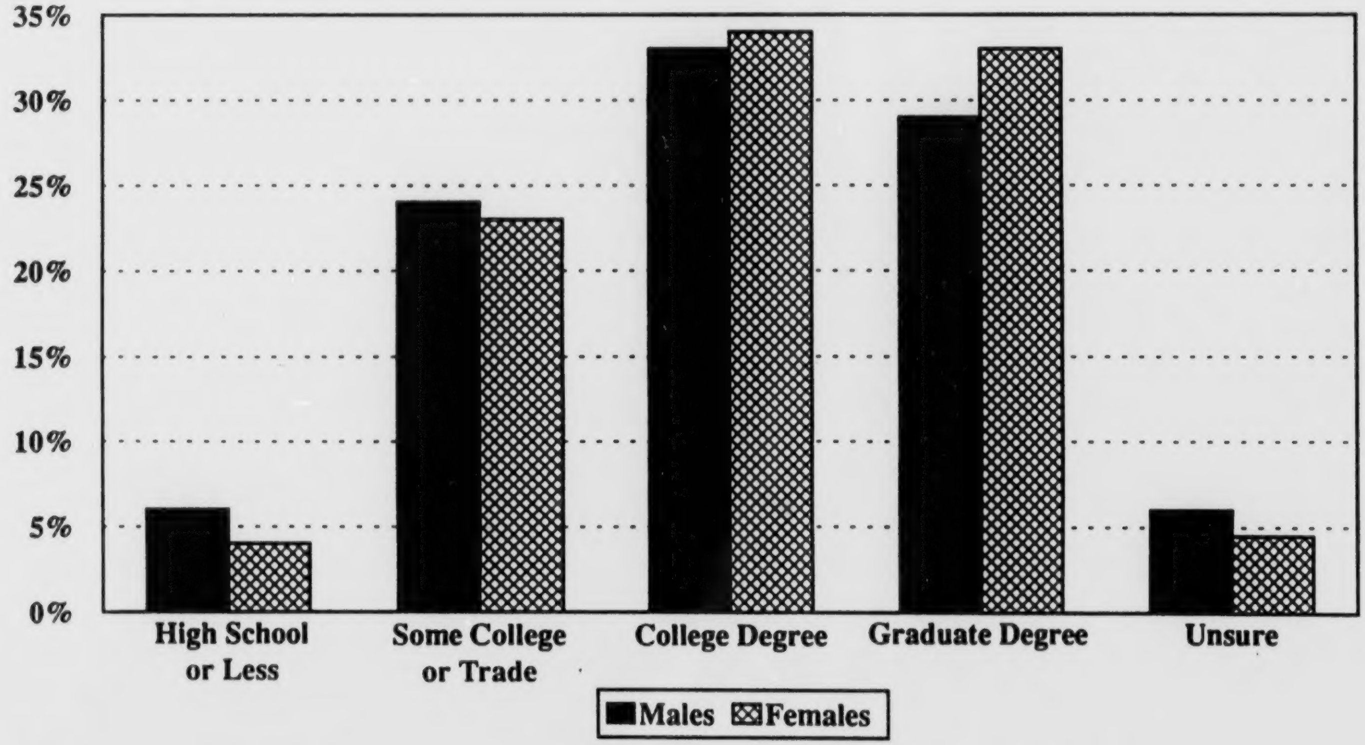
- Five percent of all seniors expect to go no further than high school, but the percentage is significantly lower for females (3.8 percent) than for males (6.3 percent). In addition, a significantly greater percentage of males are uncertain of their academic future.

---

[44] For an excellent review, see Schneider, B., & Coleman, J. S. (eds.) 1993. *Parents, Their Children, and Schools*. Boulder, CO: Westview Press.

[45] Green, P. 1993. *High School Seniors Look to the Future, 1972 and 1992*. Washington, D.C.: U.S. Department of Education. NCES 93-473.

Figure 6.1:
Educational Expectations Held by 1992 High School Seniors by Gender



Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Field of Study or Training

Seniors intending to continue their education after high school were asked to identify their most likely field of study. Those intending to pursue non-academic training were asked to indicate the area of training they were most likely to pursue.[46]

Fields of college study are presented in Table 6.2, along with the percentage of seniors who select each field as the one they are most likely to pursue.

- By far the largest number of seniors choose business as their most likely field of study, approximately 14 percent of all seniors.
- Other fields of study selected by large numbers of seniors include "pre-professional" programs, health, engineering, and education. Each of these fields is mentioned by approximately 7 percent of seniors.
- Home economics, mathematics, foreign languages, philosophy, and ethnic studies are selected by less than 1 percent of seniors.
- A small number of seniors intend to pursue a course of study in science or math: approximately 3 percent of seniors think they will major in biological sciences, about 1 percent think they will major in a physical science, and less than 1 percent believe they will major in mathematics.

---

[46] Percentages in the tables and figures in this section of the report represent the percent of all seniors choosing a particular field of study or training--those who did not answer a question because it did not apply to their situation are included as a separate category in the computation of the percentages reported.

Table 6.2
Percent of 1992 High School Seniors Most Likely to Study Various Academic Field

	Percent
Agriculture	1.2
Architecture	1.6
Art	2.9
Biological Sciences	2.6
Business	13.8
Communications	3.0
Computer & Info Science	2.3
Education	6.8
Engineering	6.9
English	1.6
Ethnic Studies	0.2
Foreign Languages	0.5
Health Occupations	7.1
Home Economics	0.7
Interdisciplinary Studies	0.2
Mathematics	0.6
Music	1.4
Philosophy	0.3
Physical Science	1.3
Pre Professional	7.3
Psychology	4.0
Social Sciences	3.7
Other	7.5
Do Not Plan to Attend College	22.5

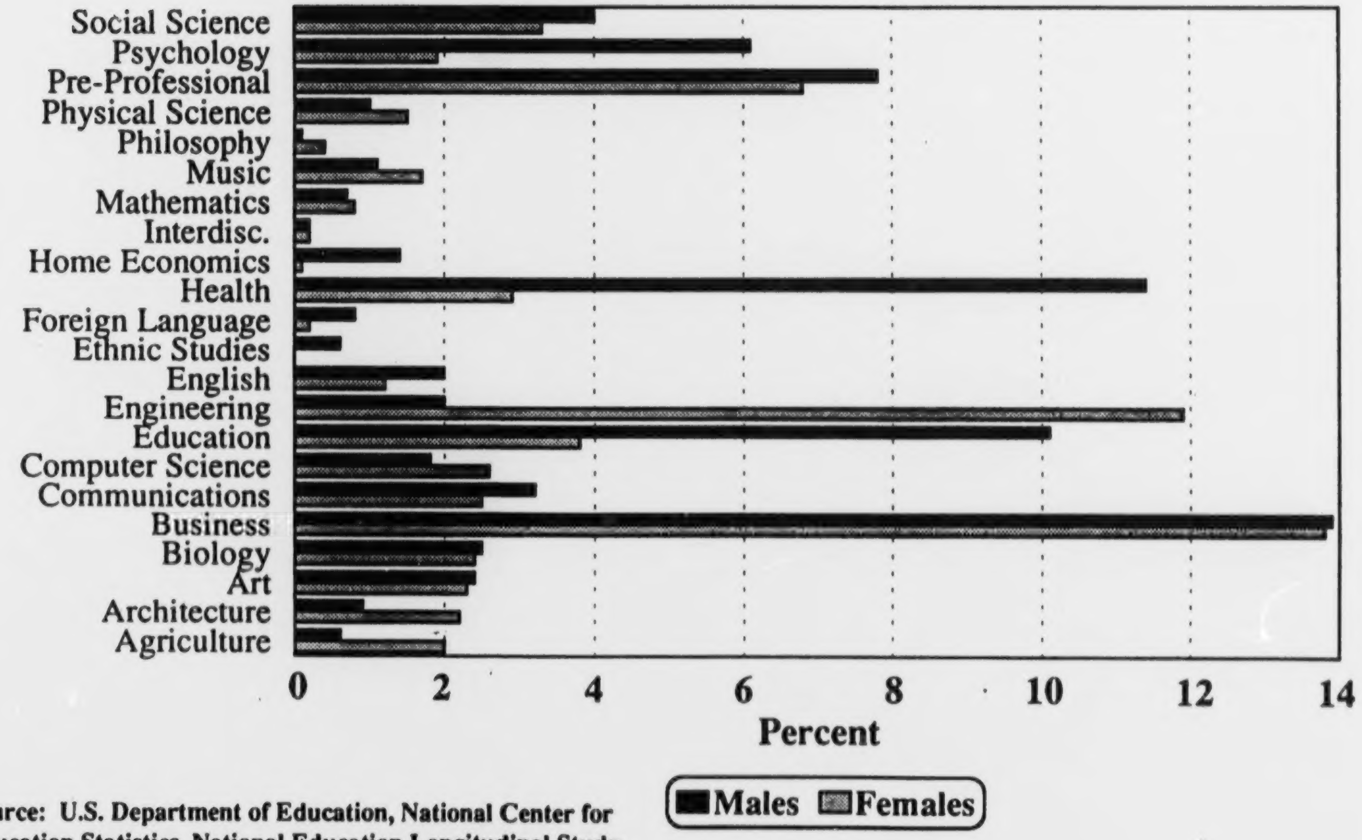
Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Figure 6.2. presents information on the fields of study chosen by male and female seniors. While some fields attract equal percentages of men and women, interesting differences emerge for other fields of study.

- Business remains the field chosen by the largest percentage of both males and females, and is chosen by them in approximately equal proportions (14 percent).

- Several fields are chosen by a greater proportion of females than males: Education (10 percent compared to 4 percent, health (11 percent compared to 3 percent), and psychology (6 percent compared to 2 percent). A significantly greater proportion of males than females think they will study engineering (12 percent compared to 2 percent).

Figure 6.2:
Percent of 1992 High School Seniors Most Likely to Study Various Academic Fields by Gender



Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Seniors' choices for vocational training are presented in Table 6.3. No single field of vocational study attracts a large number of seniors, and preferences appear quite diffuse across the alternatives.

- Auto mechanics and health care are the most frequently chosen fields of vocational training; about 2 percent of seniors say they are likely to pursue training in those fields.
- Electronics, cosmetology, secretarial training, business management, data processing, and computer programming are each selected by about 1 percent of seniors.

Table 6.3
Percent of 1992 High School Seniors Most Likely to Pursue Various Types of Non-Academic Training

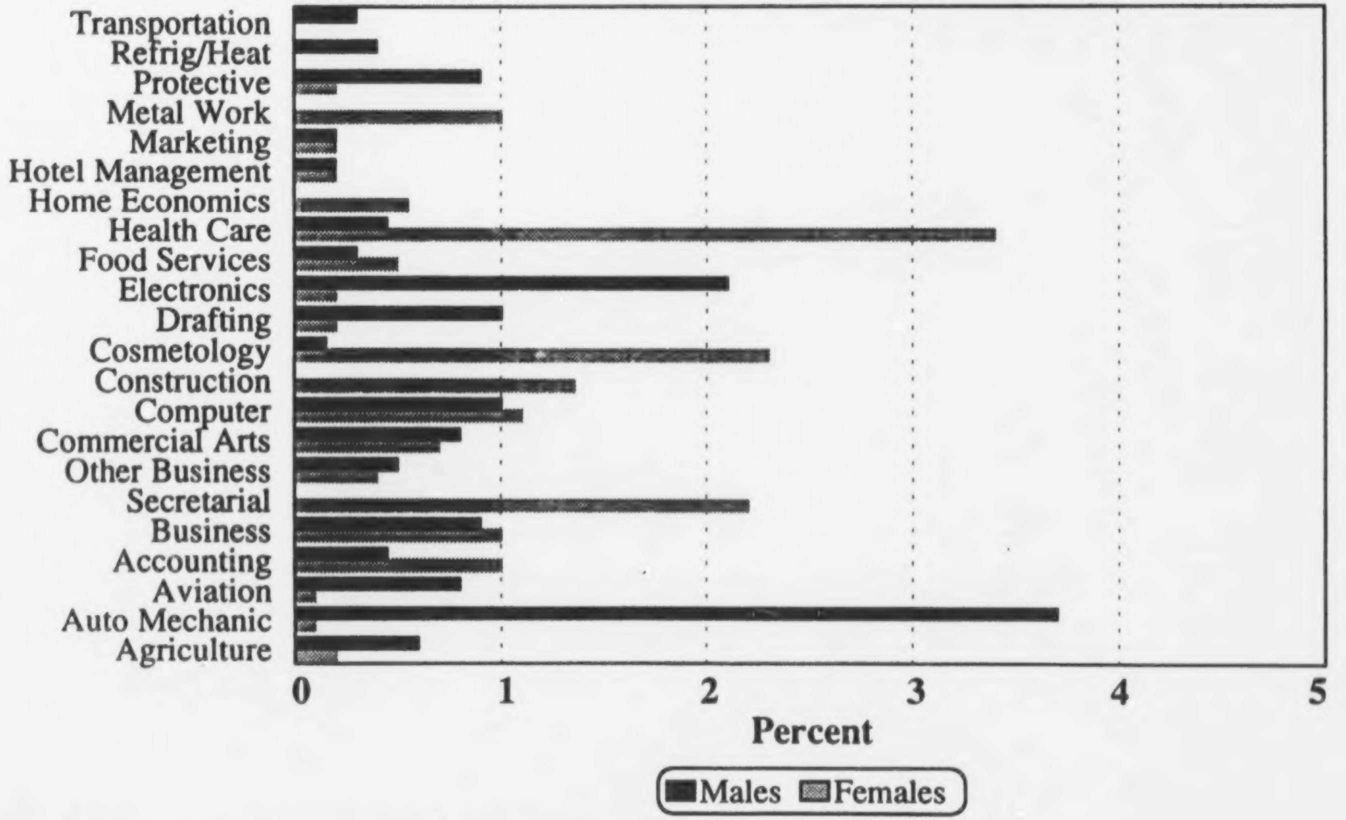
	Percent
Agriculture	0.4
Auto Mechanics	1.9
Aviation	0.5
Accounting	0.7
Business Management	1.0
Secretarial & Related	1.1
Other Business & Office	0.5
Commercial Arts	0.7
Computer Programming/DP	1.0
Construction Trades	0.7
Cosmetology/Hair Styling	1.2
Drafting	0.6
Electronics	1.2
Food Services	0.4
Health Care	1.7
Home Economics	0.3
Hotel & Restaurant Management	0.2
Marketing & Distribution	0.2
Metal Working	0.5
Protective Services	0.5
Refrigeration, Heating & A.C.	0.4
Transportation & Material Moving	0.2
Other	2.6
Do Not Plan Vocational Training	81.5

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

It is evident from the data presented in Figure 6.3 that a number of differences exist between senior men and women in the fields of non-academic training they are likely to pursue. Among occupations selected by at least 1 percent of the seniors,

- Gender differences can be observed in health care, cosmetology, secretarial, auto mechanics, and electronics.
- Males are more likely than females to intend to pursue training in auto mechanics and electronics; females are more likely than males to plan to pursue health care, cosmetology, and secretarial training.
- No significant differences were found in computer programming or business management.

Figure 6.3:
Percent of 1992 High School Seniors Most Likely to Pursue Various Areas of Non-Academic Training by Gender



Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Occupational Goals

In this study, seniors were asked about the occupation they expected to have at age 30. The list of occupations presented to respondents included two categories of general professionals, as well as separate categories for teachers and managers. These data are presented in Table 6.4.

- Approximately 18 percent of all seniors expect they will have a professional occupation at age 30 that is generally regarded as requiring graduate education (such as being a minister, dentist, doctor, lawyer, scientist, or college teacher). Another 27 percent expect to hold some other type of professional job at age 30.
- An additional 11 percent think they will hold business management positions, either as a manager in an organization (5 percent) or as a small business owner (6 percent).

Table 6.4
Percent of 1992 High School Seniors Expecting to Have Various Occupations at Age 30

	Percent
Office Worker	3.1
Tradesperson	2.5
Farmer	0.9
Full-Time Homemaker	1.0
Laborer	0.7
Manager	5.3
Military	2.9
Machine Operator	1.0
Elementary/Secondary School Teacher	7.4
Professional I*	27.4
Professional II**	17.9
Small Business Owner	6.0
Protective Services	3.7
Sales	1.7
Service Worker	2.3
Technical	5.4
Not Planning to Work	0.2
Other	10.2
Will Be in School	0.4

* Professional I = Accountant, Registered Nurse, Engineer, Banker, Librarian, Writer, Social Worker, Actor, Athlete, Artist, Politician, But not Including School Teacher.

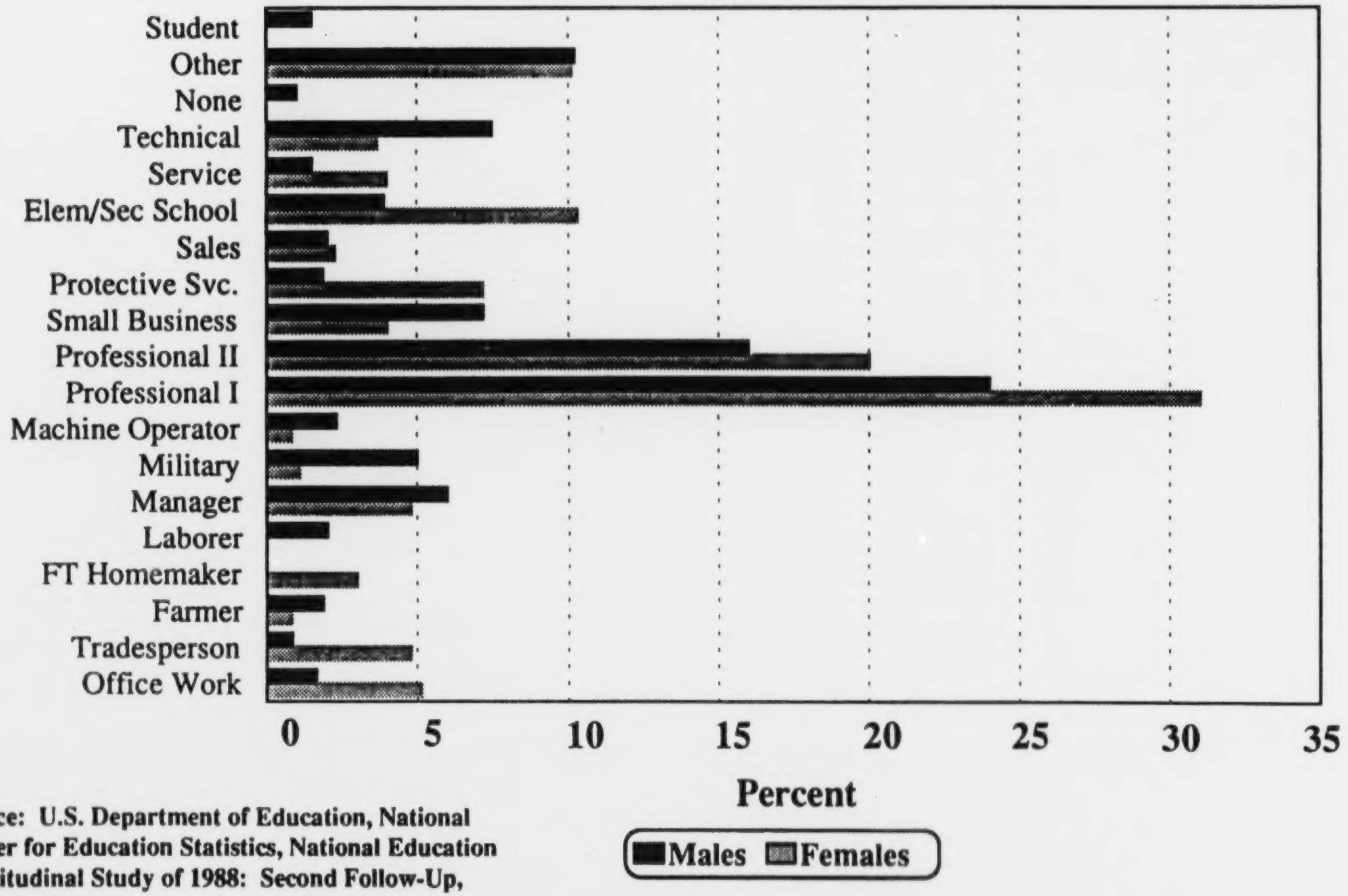
** Professional II = Minister, Dentist, Doctor, Lawyer, Scientist, College Teacher.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Once again, gender differences in occupational preference are observable (see Figure 6.4).

- A larger percentage of females than males expect professional occupations.
- Among seniors, males are more likely than females to see themselves as managers (6 percent compared to 5 percent) and small business owners (8 percent compared to 4 percent) at age 30.
- Males also show a greater preference than females for technical (7 percent compared to 3 percent), trade (5 percent compared to .3 percent), military (5 percent compared to .8 percent), and protective service (6 percent compared to 1 percent) positions. Females are more likely than males to prefer positions in elementary and secondary education (11 percent compared to 4 percent).

Figure 6.4:
Percent of 1992 High School Seniors Expecting to Have Various Occupations at Age 30 by Gender



Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Education and Occupational Choice

Students' perceptions about the level of education they will need to work in their chosen fields can be expected to influence their postsecondary plans. Because of this, seniors were asked to gauge the level of education they thought they would need for the occupation they expect to have at age 30 (see Table 6.5).

- Six percent believe that their high school diploma will be sufficient to attain their occupational goals at age 30. Another 25 percent think they will need to attend at least some college.
- Over two-thirds believe they will need to complete at least a college degree: 38 percent believe they will need to complete a baccalaureate degree, and 30 percent report they will need a graduate degree.

Perceptions of educational requirements are seen differently by men and women, as illustrated in Figure 6.5.

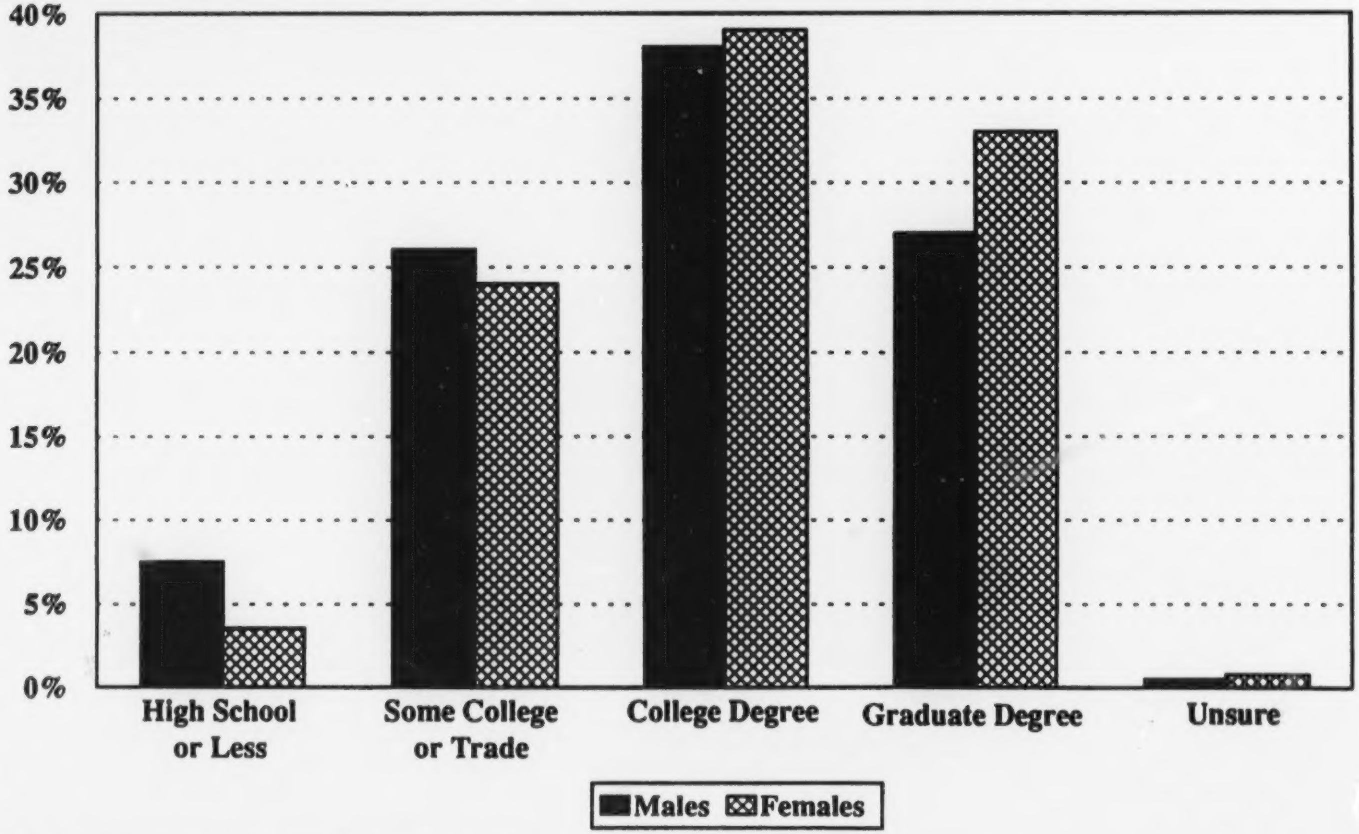
- Approximately equal proportions of males (38 percent) and females (39 percent) expect that a college degree will be sufficient.
- A greater proportion of females than males believe that they will need a graduate degree (33 percent compared to 27 percent), while a higher percentage of males than females feel they can get by with a high school diploma or less. (8 percent compared to 4 percent).

Table 6.5
Percent of 1992 High School Seniors Indicating Level of Education Necessary for the Job They Expect to Have at Age 30

	High School or Less	Some College	College Degree	Graduate Degree	Not Planning to Work
TOTAL	5.7	25.2	38.5	30.0	0.5

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Figure 6.5:
Percent of 1992 High School Seniors Indicating Level Education Necessary for the Job They Expect to Have at Age 30 by Gender



Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Chapter 7: Experiences Outside of School

Only part of a student's life is spent in school. What happens after school--at home, with friends, and at work--is equally important. Extracurricular activities, for example, can play an important role in students' growth and development. They can provide students with an opportunity to explore interests outside of the classroom, and can offer students a means for organized social interaction. There are other activities, however, in which many students engage that can be harmful to their growth and development; drug and alcohol use are among these. This chapter explores student life outside of school, presenting a snapshot of seniors' work, civic activities, use of illicit drugs and alcohol, and television viewing.

Work

The employment status of seniors is presented in Table 7.1. About half of all seniors work in addition to going to school. Two-thirds of working seniors are employed half-time or less and one-third work more than 20 hours per week. Fewer males than females are employed (48 percent compared to 52 percent), and a larger proportion of whites are employed than any other racial or ethnic group (54 percent compared to less than 42 percent).

Perhaps the most interesting relationship reported in Table 7.1 is that between class rank and number of hours worked. Seniors ranking at the top of their class are as likely to be employed as lowest-ranking seniors. However, they are less likely than other seniors to be working more than half time: about one in every ten top-ranking seniors (11 percent) is employed more than 20 hours per week compared with one in every five seniors (21 percent) ranked in the bottom quarter of their class.

The type of school and program attended are also related to the number of hours worked. As might be expected, seniors attending NAIS private schools are less likely to work after school than those attending public or Catholic schools. Seniors enrolled in vocational education programs are more likely than seniors in other high school programs to be working. And seniors in vocational programs work longer hours--over a quarter of these seniors work more than 20 hours each week.

Table 7.1
Percent of 1992 High School Seniors Employed During the School Year

	Not Working	Working 20 Hours A Week or Less	Working More than 20 Hours/Week
TOTAL	50.4	33.1	16.4
GENDER			
Male	52.5	28.7	18.8
Female	48.4	37.5	14.1
RACE/ETHNICITY			
Asian	58.2	28.7	13.1
Hispanic	61.0	23.6	15.4
Black	67.9	19.8	12.3
White	45.7	36.9	17.4
SOCIOECONOMIC STATUS			
Low	55.9	25.2	18.8
Middle	47.2	35.1	17.7
High	51.3	38.0	10.7
PARENTS' EDUCATION			
Less than H.S.	57.4	23.3	19.3
High School Graduate/GED	48.4	31.5	20.1
Some College Work	47.1	35.0	17.9
Completed College	48.6	39.2	12.2
Graduate Degree	54.5	35.2	10.3
TESTED PROFICIENCY			
Below basic in at least one area	56.0	25.3	18.7
At least basic in all areas	50.5	35.4	12.9
NATIVE LANGUAGE			
English	48.8	34.5	16.6
Non-English	65.1	22.0	12.9

Table 7.1
Percent of 1992 High School Seniors Employed During the School Year (Cont'd)

	Not Working	Working 20 Hours A Week or Less	Working More than 20 Hours/Week
HIGH SCHOOL PROGRAM[1]			
General	50.9	29.7	19.4
College Preparatory	50.7	37.9	11.4
Vocational	42.1	30.4	27.5
CLASS RANK			
Highest Quarter	47.7	41.4	11.0
Third Quarter	44.7	39.5	15.8
Second Quarter	47.0	34.3	18.7
Lowest Quarter	54.2	25.1	20.6
URBANICITY OF SCHOOL			
Urban	53.3	31.6	15.1
Suburban	47.9	35.0	17.1
Rural	51.0	32.1	16.9
TYPE OF SCHOOL			
Public	49.6	33.2	17.2
Catholic	50.9	37.6	11.5
NAIS Private	78.2	16.7	5.2
Other Private	62.4	30.2	7.4
PERCENT RECEIVING SUBSIDIZED LUNCH			
0 - 10%	47.3	37.0	15.8
11 - 49%	51.2	33.1	15.7
50% or more	61.0	20.8	18.2

[1] This variable represents respondents' self-report of the type of high school program in which they participated.

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

School Government and Volunteer Work

The cultivation of citizenship has long been a major goal of American schools. The National Education Goals Panel has reiterated this goal, proposing that "every school in American will ensure that all students learn to use their minds well, so they may be prepared for responsible citizenship, further learning, and productive employment in our modern economy." Students begin the process of learning to be good citizens by involvement in activities in school and in the wider community. Two such activities are explored here: high school seniors' participation in student government and community volunteer work. Data on participation is presented in Table 7.2.

School government. School government is an activity that allows students to develop leadership skills. One-in-six seniors participates in school government and female seniors are more likely than males to participate (18 percent compared to 14 percent). There is a significant difference between seniors whose parents have a high school education or less and those whose parents have bachelor's degrees and graduate degrees. Seniors whose parents have advanced degrees participate in student government at approximately twice the rate of seniors whose parents did not finish high school. Eleven percent of seniors with parents who have less than a high school education participate in student government. Among seniors whose parents hold post-baccalaureate degrees, that number is doubled, 22 percent.

Seniors who perform better academically are more likely than others to be involved in student government. A little over a quarter of seniors who rank in the top quarter of their class report having participated in student government whereas less than 10 percent of those who rank in the bottom quarter of their class are active in student government.

Volunteer work. Volunteer work and community service help foster ties between students and their communities. Some schools require or strongly encourage student volunteer activities. By contributing to the communities in which they live, students can increase their sense of belonging in the community and establish a stake in their community's success.

High school seniors are active in their communities. Forty-four percent of seniors report that they have performed some kind of volunteer work during the past two years. Volunteer work is more common among female than male seniors: half of these young women have engaged in volunteer work while 39 percent of the young men have done so.

Community volunteer work appears to be related to parental education and the schools students attend. Seniors from homes in which parents are college-educated are more likely to be involved in these activities than seniors from less-educated families. For example, 60 percent of seniors whose parents have graduate degrees have done volunteer work compared to 31 percent of seniors whose parents did not finish high school. And the rate of involvement in volunteer work is higher among those in college preparatory tracks (56 percent) than among those enrolled in general (36 percent) or vocational education (30 percent) programs.

- Seniors attending NAIS private and Catholic schools are more typically engaged in volunteer work than seniors attending public schools (73 percent and 67 percent compared to 42 percent).

- Volunteer work is more prevalent among those ranked in the top quarter of their class than those in the bottom quarter (61 percent compared to 29 percent).

- The seniors in urban schools volunteer at a higher rate than their suburban or rural counterparts (49 percent compared to 44 percent and 40 percent).
- A greater proportion of white (46 percent) and Asian seniors (48 percent) volunteer than black (36 percent) or Hispanic seniors (39 percent).

Table 7.2
Percent of 1992 High School Seniors Participating in Student Government or Volunteer Work

	Student Government During Current School Year	**Community Volunteer Work During Past Two Years**
TOTAL	16.0	44.0
GENDER		
Male	13.6	38.5
Female	18.5	49.6
RACE/ETHNICITY		
Asian	15.1	48.1
Hispanic	15.1	39.1
Black	17.3	36.0
White	16.0	46.1
SOCIOECONOMIC STATUS		
Low	12.0	30.0
Middle	15.8	42.6
High	20.4	60.9
PARENTS' EDUCATION		
Less than H.S.	11.3	30.9
High School Graduate/GED	13.1	34.3
Some College Work	16.7	43.9
Completed College	18.8	52.9
Graduate Degree	21.8	60.4
TESTED PROFICIENCY		
Below basic in at least one area	12.8	26.9
At least basic in all areas	16.8	48.7
NATIVE LANGUAGE		
English	16.3	44.5
Non-English	14.8	40.8

Table 7.2
Percent of 1992 High School Seniors Participating in Student Government or Volunteer Work (Cont'd)

	Student Government During Current School Year	Community Volunteer Work During Past Two Years
HIGH SCHOOL PROGRAM[1]		
General	11.5	36.4
College Preparatory	22.1	55.9
Vocational	9.4	29.5
CLASS RANK		
Highest Quarter	25.8	61.3
Third Quarter	14.0	45.7
Second Quarter	11.7	35.6
Lowest Quarter	9.2	28.7
URBANICITY OF SCHOOL		
Urban	15.8	49.0
Suburban	16.2	43.6
Rural	15.9	40.3
TYPE OF SCHOOL		
Public	15.5	42.0
Catholic	14.8	66.7
NAIS Private	19.7	73.3
Other	36.2	51.2
PERCENT RECEIVING SUBSIDIZED LUNCH		
10% or less	16.0	48.8
11% - 49%	16.0	41.0
50% or more	16.7	38.0

[1] This variable represents respondents' self-report of the type of high school program in which they participated.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Illicit Drugs

Drug use among high school seniors has fallen dramatically over the past several years.[47] Since 1986, the widespread use of cocaine has plummeted. Marijuana use has also declined substantially, so that today only a small percentage of high school seniors use marijuana or cocaine.

Marijuana. Data presented in Table 7.3 indicate that approximately one-quarter of all high school seniors report having tried marijuana, down from a high of 60 percent in 1979.[48] Marijuana use is most prevalent among white and Hispanic seniors. Ten percent of white seniors report using marijuana during the past month compared to 8 percent of Hispanic seniors, 4 percent of black seniors, and 4 percent of Asian seniors. This means that white seniors report using marijuana in the past 30 days at more than twice the rate of Asian and black seniors.

Contrary to current media images of drug use, marijuana use is not a problem that is concentrated in urban areas or more prevalent among the less educated. Experimentation with marijuana at least once is as prevalent among seniors whose parents received a graduate degree as among those whose parents did not complete high school (27 percent). And marijuana use is more prevalent in the suburbs (29 percent) than in cities (25 percent). Marijuana use is also more prevalent at elite private high schools than in public schools. One-third of seniors at NAIS private high schools report using marijuana during the past year, while 16 percent of seniors at public schools report using marijuana in the same time period. Furthermore, seniors in schools with high concentrations of less advantaged students (those receiving free or reduced-price lunches) are no more likely to use marijuana than those in more affluent schools.

As expected, seniors who perform well in school are less likely to use marijuana than those who are doing less well. Five percent of seniors in the top quarter of their classes used marijuana during the past month whereas 13 percent of seniors ranked in the bottom quarter of their senior class report using marijuana in the past 30 days. Seniors in college preparatory programs report significantly lower use of marijuana than their counterparts in other programs, in both lifetime use and use during the last 30 days.

Cocaine. Patterns of cocaine use are somewhat different than patterns of marijuana use. Both white (4 percent) and Hispanic (7 percent) seniors are more likely to report that they have tried cocaine than black seniors (1.3 percent). The same pattern holds for more recent use: three-tenths of one percent of black seniors report having used cocaine during the past year, compared to 3 percent of Hispanic seniors and 2 percent of white seniors.

No significant differences in cocaine use are observed based on the level of parents' education. Differences between urban and suburban schools and public and private schools are less pronounced for cocaine than marijuana. There is no significant difference between seniors at urban and suburban schools in the use of cocaine. There are also no significant differences among the different types of schools in the percentage of seniors who have tried cocaine, although seniors at Catholic schools are less likely to report cocaine use during the last month than seniors at public schools (.3 percent compared to .9 percent).

---

[47] Johnston, L.D., O'Malley, P.M., & Bachman, J.G. 1993. *National Survey Results on Drug Use from the Monitoring the Future Study, 1975-1992*. Washington, D.C.: United States Department of Health and Human Services. NIH 93-3597.

[48] Johnston, O'Malley, and Bachman (ibid.) find that 32.6% of twelfth-grade students report having tried marijuana, 21.9% say they have used it in the past year, and 11.9% have used marijuana in the past thirty days.

Cocaine use is linked with academic performance in school. Experimentation with cocaine is uncommon among seniors who are ranked in the top quarter of their class; about 1 percent of these seniors have tried cocaine compared to nearly 8 percent of those ranked in the lowest quarter of their graduating class.

Table 7.3
Percent of 1992 High School Seniors Reporting Illicit Drug Use: Marijuana and Cocaine

	Marijuana			Cocaine		
	In Lifetime	During Past Year	During Past Month	In Lifetime	During Past Year	During Past Month
TOTAL	26.6	16.6	9.2	4.2	1.9	0.9
GENDER						
Male	30.1	18.7	11.4	5.3	2.4	1.3
Female	23.2	14.7	7.1	3.1	1.3	0.4
RACE/ETHNICITY						
Asian	16.7	11.1	4.3	2.7	1.6	0.7
Hispanic	27.8	15.8	7.6	7.1	3.2	2.1
Black	18.7	9.1	3.8	1.3	0.3	0.2
White	28.0	18.1	10.4	4.3	2.0	0.8
SOCIOECONOMIC STATUS						
Low	26.3	14.1	8.1	5.4	2.5	1.3
Middle	27.2	16.9	8.9	4.0	1.8	0.8
High	25.2	18.2	10.8	3.0	1.3	0.6
PARENTS' EDUCATION						
Less than H.S.	26.5	14.0	7.4	6.7	3.2	1.9
High School Graduate/GED	28.0	16.8	9.4	4.5	1.9	1.0
Some College Work	26.4	16.8	9.0	4.3	1.9	0.7
Completed College	25.2	17.4	10.0	3.5	1.8	0.7
Graduate Degree	26.8	18.8	10.8	2.9	1.3	0.6
TESTED PROFICIENCY						
Below basic in at least one area	29.8	16.7	10.3	5.4	2.8	1.8
At least basic in all areas	26.2	16.7	9.1	3.9	1.7	0.6
NATIVE LANGUAGE						
English	27.3	17.2	9.7	4.1	1.8	0.8
Non-English	19.5	11.5	5.2	4.4	2.1	1.3

Table 7.3
Percent of 1992 High School Seniors Reporting Illicit Drug Use: Marijuana and Cocaine (Cont'd)

	Marijuana			Cocaine		
	In Lifetime	During Past Year	During Past Month	In Lifetime	During Past Year	During Past Month
HIGH SCHOOL PROGRAM[1]						
General	30.2	18.5	10.4	5.6	2.5	1.1
College Preparatory	22.2	14.9	7.8	2.6	1.2	0.5
Vocational	29.4	16.7	10.2	5.3	2.4	1.2
CLASS RANK						
Highest Quarter	15.3	9.9	4.9	1.2	0.5	0.3
Third Quarter	24.2	16.0	6.9	3.2	1.4	0.6
Second Quarter	33.1	18.8	11.0	5.9	2.3	1.0
Lowest Quarter	40.6	22.8	13.0	7.6	3.1	1.4
URBANICITY OF SCHOOL						
Urban	25.3	16.1	8.5	3.8	1.6	0.4
Suburban	29.4	19.4	10.6	4.9	2.0	0.9
Rural	24.0	13.5	8.0	3.6	1.9	1.3
TYPE OF SCHOOL						
Public	26.8	16.5	9.2	4.4	1.9	0.9
Catholic	25.2	19.1	10.1	2.5	1.3	0.3
NAIS Private	39.2	33.6	22.9	3.7	3.2	2.4
Other Private	16.4	8.0	2.7	0.9	0.4	0.3
PERCENT RECEIVING SUBSIDIZED LUNCH						
0 - 10%	29.1	19.1	9.9	4.0	1.7	0.6
11 - 49%	24.9	14.0	8.0	3.7	1.8	0.8
50% or more	24.5	13.9	7.1	7.2	2.4	1.6

---

[1] This variable represents respondents' self-report of the type of high school program in which they participated.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Alcohol

As illustrated in Table 7.4, alcohol is the "drug of choice" among high school seniors. A majority of high school seniors, 88 percent, report having tried alcohol, and alcohol consumption occurs within almost every subgroup examined. Like drug use, recent alcohol use is more common among men (54 percent) than women (44 percent), although approximately equal proportions of males and females have tried it. In terms of trying alcohol, 89 percent of Hispanics and 90 percent of whites; have tried alcohol compared to 80 percent of blacks and 78 percent of Asians. However, there appears to be little correlation between alcohol use and parents' education.

Because alcohol consumption is so universal, it is informative to separate out those seniors who drink to intoxication. Here that is defined as any person having five or more drinks in a row during the past two weeks. Over one-quarter of all seniors report drinking five or more drinks in a row during the past two weeks. This type of heavy drinking is reported more frequently among males (35 percent) than females (20 percent). Thirty percent of white seniors and 27 percent of Hispanic seniors report drinking heavily in the past two weeks, compared to 13 percent of blacks and 17 percent of Asians. In fact, the proportion of white seniors reporting having five or more drinks in the past two weeks is more than twice that of black seniors.

Heavy drinking is more prevalent among seniors at Catholic high schools than among seniors at public schools. Nearly 37 percent of seniors at Catholic schools report having five or more drinks in the past two weeks, compared to 27 percent of seniors at public schools. Seniors at non-NAIS private schools are less likely to drink heavily than seniors at public schools.

Performance in school and drinking to intoxication are correlated. While 17 percent of seniors who rank in the top quarter of their graduating class report drinking heavily in the past two weeks, nearly 40 percent of those ranking in the bottom quarter of their class have had five or more drinks in the last two weeks.

Clearly, alcohol use is a greater problem among high school seniors than either marijuana or cocaine. It is especially prevalent among white and Hispanic seniors, the two groups who are also more likely to use illicit drugs. Stereotypes of typical teenage alcohol users do not reflect reality. Alcohol use is more likely to occur among seniors in elite private schools and in schools in which fewer than 10 percent of all students receive free lunch than in public schools or schools in which at least half of all students receive subsidized lunch.

Table 7.4
Percent of 1992 High School Seniors Reporting Alcohol Use

	Alcohol			% of Seniors Who:
	In Lifetime	During Past Year	During Past Month	Had 5 or more drinks in a row during past two weeks
TOTAL	87.8	75.3	48.8	27.4
GENDER				
Male	88.5	77.2	53.8	35.0
Female	87.1	73.6	43.9	19.9
RACE/ETHNICITY				
Asian	78.0	61.1	34.1	16.8
Hispanic	88.6	73.8	45.8	27.4
Black	80.1	61.4	31.5	13.4
White	89.6	78.5	52.7	30.2
SOCIOECONOMIC STATUS				
Low	85.4	69.2	42.9	26.3
Middle	89.3	77.8	50.0	27.6
High	87.3	76.6	52.2	27.8
PARENTS EDUCATION				
Less than H.S.	84.7	69.1	41.5	23.8
High School Graduate/GED	88.3	76.5	49.8	29.2
Some College Work	89.7	77.7	50.2	28.3
Completed College	88.3	76.7	50.5	28.7
Graduate Degree	87.1	75.1	51.3	27.0
TESTED PROFICIENCY				
Below basic in at least one area	86.7	75.6	51.9	35.8
At least basic in all areas	89.1	76.9	49.6	26.6
NATIVE LANGUAGE				
English	88.4	76.3	50.2	28.1
Non-English	83.6	67.0	37.4	20.5

Table 7.4
Percent of 1992 High School Seniors Reporting Alcohol Use (Cont'd)

	Alcohol			% of Seniors Who:
	In Lifetime	During Past Year	During Past Month	Had 5 or more drinks in a row during past two weeks
HIGH SCHOOL PROGRAM[1]				
General	88.9	77.2	50.4	30.8
College Preparatory	87.2	73.2	46.5	23.3
Vocational	88.0	77.8	52.9	31.2
CLASS RANK				
Highest Quarter	84.5	70.6	40.8	17.1
Third Quarter	89.7	77.0	48.8	23.2
Second Quarter	92.2	83.0	58.6	37.2
Lowest Quarter	92.5	80.7	56.8	39.6
URBANICITY OF SCHOOL				
Urban	86.0	71.2	44.3	23.6
Suburban	88.6	77.7	51.4	27.8
Rural	88.6	76.2	49.5	30.2
TYPE OF SCHOOL				
Public	88.0	75.5	48.8	27.2
Catholic	91.2	80.9	57.1	36.9
NAIS Private	93.3	88.8	57.9	28.9
Other Private	75.0	54.9	30.7	14.2
PERCENT RECEIVING SUBSIDIZED LUNCH				
0 - 10%	88.8	77.9	51.2	28.3
11 - 49%	88.9	75.8	48.5	26.1
50% or more	84.4	68.9	41.9	26.5

[1] This variable represents respondents' self-report of the type of high school program in which they participated.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Television

Debates over the impact of television on children have continued for many years. There is concern about both the amount and type of programming children view. Detractors of television have argued that television viewing can result in increased aggressive behavior and decreased levels of physical activity, as well as displacement of study time, outside reading, and other activities. In this study, seniors were asked how many hours they viewed television on weekdays and weekends. By weighting the responses to the two questions, the total amount of time spent watching television can be estimated.

By their own estimates, seniors watch a great deal of television. Forty percent report viewing television for more than 20 hours per week. Less than a quarter (24 percent) of all seniors watch 10 hours of television or less per week.

The difference, as illustrated in Figure 7.1, between the television viewing habits of black seniors and seniors of other racial groups is striking. Sixty-two percent of black seniors report watching more than 20 hours of television each week. In contrast, 36 percent of white seniors watch television more than 20 hours each week.

Television viewing is directly related to the level of schooling completed by parents. As parental education increases, the proportion of 12th graders watching television more than 20 hours per week decreases. Seniors whose parents did not complete high school are almost twice as likely to watch television more than 20 hours each week than seniors whose parents attended graduate school (53 percent compared to 27 percent).

The type of school appears to be unrelated to the amount of time a student spends watching television. However, a significantly smaller percentage of seniors in college preparatory programs, than other high school programs, watch more than 20 hours of television per week (36 percent compared to 42 percent or more). Seniors who attend schools in which half of the students receive free or reduced-price lunches are more likely to be heavy television viewers than seniors attending schools with fewer than 10 percent of such students (50 percent compared to 37 percent). Finally, as illustrated in Figure 7.2, seniors ranked in the top quarter of their class are less likely than those ranked in the bottom quarter to watch more than 20 hours of television each week (32 percent compared to 42 percent).

Table 7.5
Percent of 1992 High School Seniors Reporting Various Amounts of Television Viewing

	10 Hours/ Week or Less	11-20 Hours/ Week	More than 20 Hours/Week
TOTAL	23.8	36.4	39.8
GENDER			
Male	22.3	36.9	40.8
Female	25.2	36.0	38.8
RACE/ETHNICITY			
Asian	26.4	35.2	38.4
Hispanic	22.5	34.0	43.5
Black	12.7	25.4	61.8
White	25.4	38.6	35.9
SOCIOECONOMIC STATUS			
Low	18.7	32.9	48.4
Middle	22.4	36.2	41.4
High	31.2	40.7	28.1
PARENTS' EDUCATION			
Less than H.S.	17.3	29.8	52.9
High School Graduate/GED	19.8	35.6	44.6
Some College Work	22.8	36.9	40.4
Completed College	25.7	39.7	34.6
Graduate Degree	34.0	39.1	26.9
TESTED PROFICIENCY			
Below basic in at least one area	19.5	32.9	47.6
At least basic in all areas	23.8	37.4	38.8
NATIVE LANGUAGE			
English	23.7	37.2	39.1
Non-English	23.6	31.2	45.2

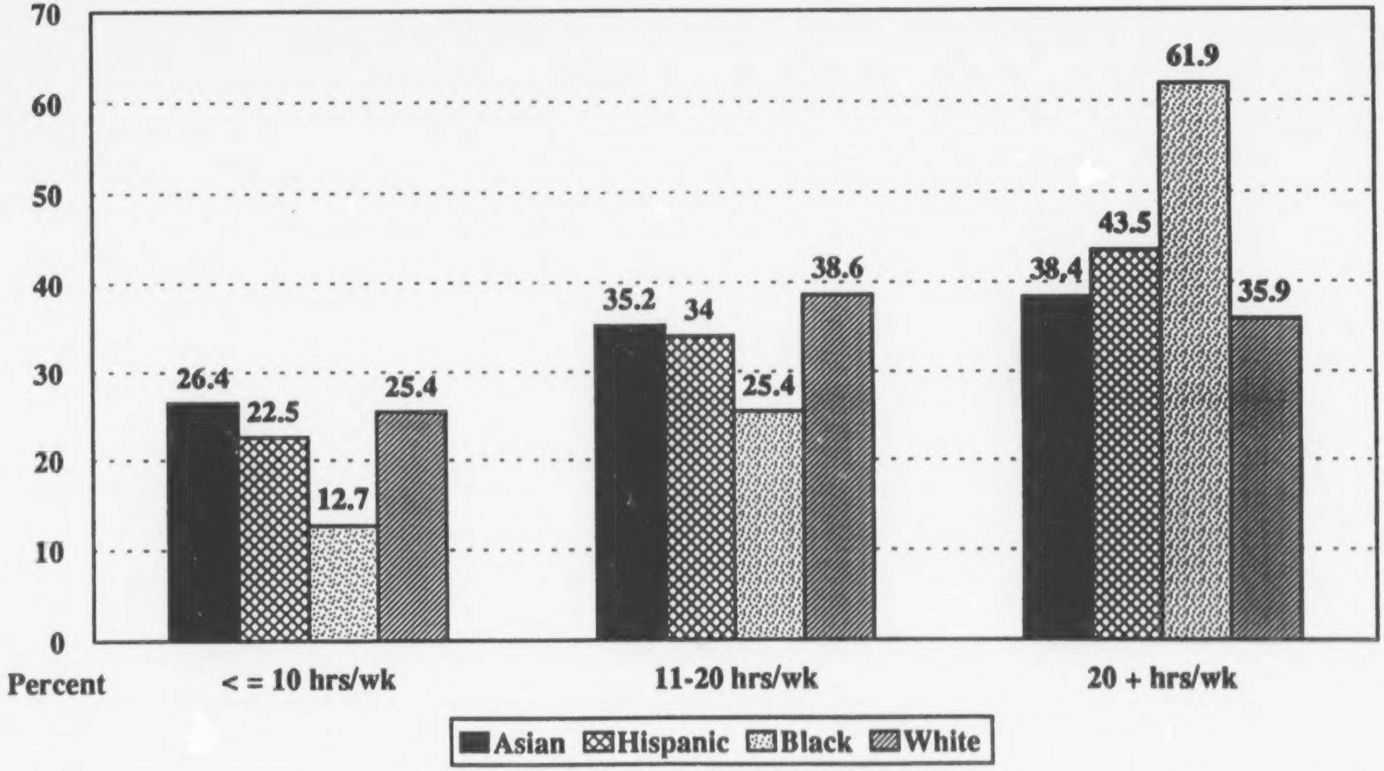
Table 7.5
Percent of 1992 High School Seniors Reporting Various Amounts of Television Viewing (Cont'd)

	10 Hours/ Week or Less	11-20 Hours/ Week	More than 20 Hours/Week
HIGH SCHOOL PROGRAM[1]			
General	22.4	35.9	41.7
College Preparatory	26.4	37.8	35.7
Vocational	19.2	35.6	45.2
CLASS RANK			
Highest Quarter	29.2	39.1	31.7
Third Quarter	23.3	34.6	42.1
Second Quarter	21.4	32.7	45.9
Lowest Quarter	20.9	36.8	42.3
URBANICITY OF SCHOOL			
Urban	22.9	35.9	41.1
Suburban	25.5	37.3	37.2
Rural	22.1	35.9	42.1
TYPE OF SCHOOL			
Public	23.4	36.2	40.3
Catholic	24.8	37.8	37.4
NAIS Private	36.8	37.8	25.4
Other Private	26.3	41.2	32.5
PERCENT RECEIVING SUBSIDIZED LUNCH			
0 - 10%	26.4	36.8	36.8
11 - 49%	22.2	36.0	41.7
50% or more	16.8	33.0	50.2

[1] This variable represents respondents' self-report of the type of high school program in which they participated.

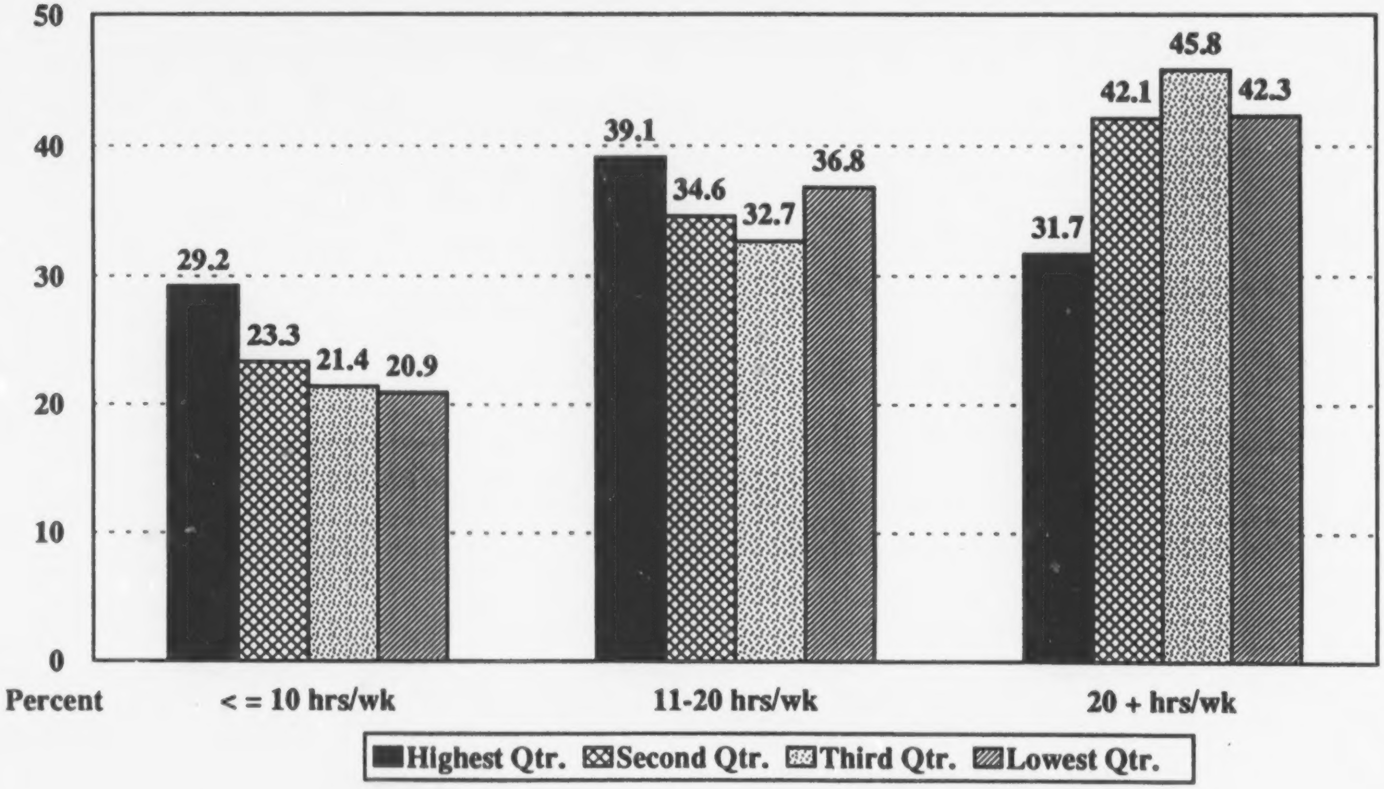
Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Figure 7.1:
Percent of 1992 High School Seniors Reporting
Various Amounts of Television Viewing by Race/Ethnicity



Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Figure 7.2:
Percent of 1992 High School Seniors Reporting Various Amounts of Television Viewing by Class Rank



Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Appendix A: NELS:88 Study Design

The National Education Longitudinal Study of 1988: Overview

NELS:88's major features include the planned integration of student, dropout, parent, teacher, and school studies; the initial concentration on a 1988 eighth grade student cohort to be followed over a period of ten years; the inclusion of supplementary components to support analyses of geographically or demographically distinct subgroups; and the design linkages to previous longitudinal studies and other current studies.

The **base year** of the National Education Longitudinal Study of 1988 (NELS:88) represented the first stage of a major longitudinal effort designed to provide trend data about critical transitions experienced by students as they leave elementary school and progress through high school and into postsecondary institutions or the work force. This study of the 1988 eighth grade cohort collects data about educational processes and outcomes pertaining to student learning, predictors of dropping out, and school effects on students' access to programs and equal opportunity to learn.

The **first follow-up** in 1990 provided the first opportunity for longitudinal measurement of the 1988 baseline sample. It also provided a comparison point to high school sophomores ten years before, as studied in HS&B. The study captured the population of early dropouts (those who leave school between the end of eighth grade and the end of tenth grade), while monitoring the transition of the student population into secondary schooling.

The **second follow-up** took place in 1992, when most sample members entered the second term of their senior year. The second follow-up provides a culminating measurement of learning in the course of secondary school, and also collects information that will facilitate investigation of the transition into the labor force and postsecondary education after high school. (Freshening[49] the NELS:88 sample to represent the twelfth grade class of 1992 makes trend comparisons with the senior cohorts that were studied in NLS-72 and HS&B possible.) In addition to surveying the students who were in school during the first follow-up, the NELS:88 second follow-up resurveyed students who were identified as dropouts in 1990, and identified and surveyed those additional students who left school after the first follow-up.

The **third follow-up** took place in the spring of 1994, when most sample members had been out of school for two years. The 1994 data collection was designed to meet four general requirements for information about American education. These can be characterized as **looking backward** within the cohort(s) to understand the impact of prior experiences on current circumstances, **looking ahead** to provide a basis for understanding cohort members' future experiences, **looking within** the cohort at a single point in time to compare the outcomes and experiences of different social groups, and **looking across** cohorts by comparing the experiences of the NELS:88 cohort(s) with comparable cohorts separated by one and two decades. Major content areas for the third follow-up questionnaire were: education histories; work experience histories; work related training; family formation; opinions and other experiences; occurrence or non-occurrence of significant life events; and income. The NELS:88 **fourth follow-up** is slated for 1998.

---

[49] The process referred to here as "freshening" added students who were not in the base year sampling frame, either because they were not in the country or because they were not in eighth grade in the spring term of 1988. The 1990 freshening process provided a representative sample of students enrolled in tenth grade in the spring of 1990. The 1992 freshening process provided a representative sample of students enrolled in twelfth grade in the spring of 1992. Section 3.3.3 of Ingels et al.(*NELS:88 Second Follow-Up Student Component Data File Users' Manual*) provides a detailed description of the freshening process.

Base Year Study and Sample Design

The base year study design comprised four components: surveys and tests of **students**, and surveys of **parents, school administrators**, and **teachers**. A student questionnaire gathered information about basic background variables and a range of other topics including school work, educational and occupational aspirations, and social relationships. Students also completed a series of curriculum-sensitive cognitive tests to measure educational achievement and cognitive growth between eighth and twelfth grades in four subject areas--reading, mathematics, science, and social studies (history/geography/civics). One parent of each student was asked to respond to a parent survey intended to measure parental aspirations for children, family willingness to commit resources to children's education, the home educational support system, and other family characteristics relevant to achievement. Selected teachers (in two of the four subject areas) completed a teacher questionnaire designed to collect data about school and teacher characteristics, evaluations of the selected students, course content, and classroom teaching practices. Finally, a school administrator questionnaire was completed by school principals. It gathered descriptive information about the school's teaching staff, the school climate, characteristics of the student body, and school policies and offerings.

In the NELS:88 base year, a two-stage stratified probability design was used to select a nationally representative sample of eighth grade schools and students. Schools constituted the primary sampling unit; the target sample size for schools was 1,032. A pool of 1,032 schools was selected through stratified sampling with probability of selection proportional to eighth grade size and with oversampling of private schools. A pool of 1,032 replacement schools was selected by the same method. Of the 1,032 initial selections, 30 proved to be ineligible. Of the 1,002 eligible selections, 698 participated. An additional 359 schools (supplied by alternative selections available from the replacement pool) also participated, for a total school sample of 1,057 cooperating schools, of which 1,052 schools (815 public schools and 237 private schools) contributed usable student data. For 1,035 of these 1,052 schools, both student and school administrator data were received. In the NELS:88 base year design, students were the secondary sampling unit. The second stage--student sampling--produced a random selection of 26,432 students among participating sampled schools, resulting in participation by 24,599 spring term 1988 eighth graders. On average, each of the participating schools was represented by 23 student participants. Additional information about the base year sample design is provided in the *NELS:88 Base Year Sample Design Report.*[50]

First Follow-Up Core Study and Sample Design

The first follow-up of NELS:88 comprised the same components as the base year study, with the exception of the parent survey, which was not repeated in the 1990 round. In addition, three new components--the dropout study, base year ineligible study, and school effectiveness study--were initiated in the first follow-up, and a freshened sample was added to the student component. As in the base year, students were asked to complete a questionnaire and cognitive test. The cognitive test was designed to measure tenth grade achievement and cognitive growth between 1988 and 1990 in the subject areas of mathematics, science, reading, and social studies (history/geography/civics). The student questionnaire collected basic background information, and asked students about such topics as their school and home environments, participation in classes and extra-curricular activities, current jobs, their goals and aspirations, and opinions about themselves. Following the base year design, two teachers of each student were asked to complete a teacher questionnaire, and a school administrator questionnaire was completed by school principals. First-time participants in NELS:88 completed a new student supplement, containing basic demographic items which were asked in the base year but not repeated in the first follow-up. The first follow-up also surveyed and tested youths who had dropped out of school at some point between the spring term of the 1987-88 school year and that of the 1989-90 school year. The dropout questionnaire collected information on a wide range of subjects, including reasons for leaving school, school experiences, absenteeism, family formation, plans for the future, employment, attitudes and self-concept, and home environment.

---

[50] Spencer, B.D.; Frankel, M.R.; Ingels, S.J.; Rasinski, K.A.; Tourangeau, R.E.; August 1990; NCES 90-463, ERIC ED 325-502.

The selection of students was implemented in two stages. The first stage of sampling involved the selection of 21,474 students who were in the eighth grade NELS:88 sample in 1988. The representative subsample of the eighth grade cohort was augmented through a process called "freshening." The goal was to provide a representative sample of students enrolled in the tenth grade in the 1989-90 school year. Freshening added an additional 1,229 tenth graders (of whom 1,043 were found to be eligible and still retained after final subsampling) who were not contained in the base year sampling frame, either because they were not in the country, or were not in the eighth grade in the spring term of 1988.

Several components were added to the first follow-up to increase its analytic power. One of these enhancements, the **base year ineligible (BYI) study**, was added to the first follow-up in order to ascertain the 1990 school enrollment status and the 1990 NELS:88 eligibility status of students who were excluded from the base year survey due to a language barrier or physical or mental disability which precluded them from completing a questionnaire and cognitive test.

In addition to the BYI study, the **school effectiveness study (SES)**, designed to sustain analyses of school effectiveness issues, was conducted in conjunction with the first follow-up. The within-school student sample of 248 participating first follow-up high schools in the thirty largest metropolitan statistical areas was augmented to produce a probability sample of both schools and students within the framework of the primary longitudinal study.

Second Follow-Up Core Study and Sample Design

The NELS:88 second follow-up repeats all components of the first follow-up study. In addition, the parent component is included once again in the second follow-up. Two new components--the transcript and course offerings and enrollment components--were initiated in the second follow-up. The course offerings and enrollment component was implemented as a part of the school effectiveness study (SES). The transcript component was undertaken for sample members as described in section 1.3.5 below. Sample freshening was also implemented in the second follow-up to provide a representative sample of students enrolled in the twelfth grade during the spring term of the 1991-1992 school year.

As in the previous waves, students were asked to complete a questionnaire and cognitive test. The cognitive test was designed to measure twelfth grade achievement and cognitive growth between 1988 and 1992 in the subject areas of mathematics, science, reading, and social studies (history/geography/civics). The student questionnaire asked students about such topics as academic achievement; student perceptions and feelings about their curriculum and school, family structure and environment; social relations; aspirations, attitudes, and values, especially as they relate to high school and occupational or postsecondary educational plans. The student questionnaire also gathered data about the family decision-making structure during the critical transition from secondary school to postsecondary education or the work environment.

The student questionnaire contained a supplement for early graduates, the intent of which was to document the reasons for and circumstances of early graduation.

In a departure from the base year and first follow-up teacher survey designs only one teacher (either a mathematics or science teacher) of each student was asked to complete a teacher questionnaire.[51] A school administrator questionnaire, as in the first follow-up, was completed by school principals. If a student was a first-time participant in NELS:88, he or she also completed a new student supplement, containing basic demographic items which were asked in the base year but not repeated in the second follow-up.

The second follow-up, in addition to surveying students who were enrolled in school, surveyed and tested youths who had dropped out of school at some point between the spring term of the 1987-88 school year and the spring term of the 1991-92 school year. The dropout questionnaire collected information on a wide range of subjects, including reasons for leaving school, school experiences, absenteeism, plans for the future, employment, attitudes and self-concept, and home environment.

Each student and dropout selected for the first follow-up was included in the second follow-up. From within the schools attended by the sample members, 1,500 twelfth grade schools were selected as sampled schools. Of the 1,500 sampled schools, the full complement of component activities occurred in 1,374 schools. For students attending schools other than those 1,374 schools, only the student and parent questionnaires were administered. Retaining the entire first follow-up sample in the 1992 round provides a maximally efficient sample for the NELS:88 second follow-up while satisfying researchers who are interested in maximizing the presence in the study of rare policy-relevant populations.

The student sample was then augmented through freshening at the NELS:88 selected schools, the aim of which was to provide a representative sample of students enrolled in the twelfth grade during the spring term of the 1991-92 school year. Freshening added an additional 364 twelfth graders (of whom 243 were deemed eligible) who were not contained in the base year sampling frame, either because they were not in the country, or were not in the eighth grade in the spring term of 1988.[52] Additional information about the second follow-up sample design is provided in the forthcoming *NELS:88 Second Follow-Up Sample Design Report.* Most in-school survey sessions were held in the period from January through March 1992, though a few took place as late as June 1992. Dropout data collection occurred between February and October 1992.

Second Follow-Up Design Enhancements

As noted in above two new components, the **transcript** and the **course offerings and enrollment** components, were added to the NELS:88 second follow-up. These components provide archival data which describe the academic experience of high school students and the curricula offered by their schools.

---

[51] If a student was not enrolled in either a mathematics or science class, no teacher questionnaire was administered. 14,302 students, 78.5 percent of the student sample, were enrolled in a mathematics class, a science class, or both during the spring term of 1992. (Figures reported are based on raw data prior to cleaning.)

[52] Of the 364 freshened students, 76 were sampling errors, and became ineligible through questionnaire data; 15 dropped out of school between the sampling effort and data collection (these 15 are found only on the restricted use file); 13 were out of scope due to language barrier, moved out of the country, or were deceased; 9 were ineligible due to mental or physical incapacity; and the status could not be collected for 8 cases.

The complete high school transcript record was collected for 1) the contextual sample-- students attending sampled schools in the spring of 1992; 2) all dropouts, dropouts in alternative programs, and early graduates, regardless of school affiliation; and 3) triple ineligibles enrolled in the twelfth grade in the spring of 1992, regardless of school affiliation. Triple ineligibles are sample members who were ineligible, due to mental or physical handicap, for the base year, first follow-up, and second follow-up surveys. NELS:88 course-taking data will provide not only a baseline against which future student outcome measures can be compared, but will illuminate trends when contrasted to the 1982 HS&B high school transcript study, the 1987 National Assessment of Educational Progress (NAEP) transcript study, and the 1990 and 1994 NAEP transcript studies. The course offerings and enrollment component provides curriculum data from second follow-up school effectiveness study schools through which school effects on student outcomes can be studied.

NELS:88 Third Follow-Up

A subsample of the NELS:88 second follow-up sample was followed in the spring of 1994, using two methodologies: initially, computer-assisted telephone interviewing, with follow-up involving an interviewer-administered (or sometimes self-administered) hardcopy questionnaire. Third follow-up data will be released in 1995.

Appendix B: Description of Variables Used in Report

Variables Used

Classification Variables. Classification variables such as gender, race/ethnicity, region, type of school, and others listed below were used to define subgroups for comparison throughout this report. Except as specified below, these were taken directly from the student data file; the variable name from that file is indicated in parentheses following the descriptive variable name.

CLASS RANK: The class rank variable was obtained by computing the ratio of F2RRANK to F2RCSIZE, then grouping into quartiles.

GENDER: (F2SEX).

HIGH SCHOOL PROGRAM: This variable was based on F2S12A, which asked the respondent to indicate "which of the following best describes your present high school program?" For a complete list of alternatives, see the *Second Follow-Up: Student Component Data File User's Manual*, Appendix K, Student Questionnaire, p.10. For the purposes of this report, three response categories were used. These were "General high school programs" (codes 01, 13, and 15); "College preparatory" (codes 02 and 12); and Vocational (codes 03 through 11).

LOCATION OF SCHOOL: (G12URBN3).

NATIVE LANGUAGE: The indicator of native language was F2N20 with responses 2 through 15 combined into a single category labelled "Not English."

NEW BASICS COURSES TAKEN: This variable was created by summing the nonmissing values of F2RNWB1A, F2RNWB4A, and F2RNWB5A, for all respondents with valid values for these variables, yielding a variable with values ranging from 0 to 3 indicating the number of New Basics courses taken. For a complete description of the definition and computation of these variables, see the *Second Follow-Up: Student Component Data File User's Manual*, p. H-27ff. Note that the definitions used in High School and Beyond (HS&B), were also used here. Thus, remedial English courses were not counted, but other courses such as English as a Secondary Language (ESL) and the like were included. The New Basics composite provides a rough measure of cumulative course-taking in the core curriculum, but some caveats should be entered. Summing coursework gives little indication of its kind, quality, or level. For example, an English as a Second Language (ESL) student may take three years of English in a given year (such as ESL writing, ESL reading, and ESL oral skills); such a student is likely to have taken many more than four years of English in high school, but may never have completed advanced literature and composition courses. Not all high schools follow the typical 9-12 grade span structure; a substantial minority of high schools have a 10-12 span. Such schools, however, were nevertheless usually able to provide ninth grade course-taking reports, so that composites such as the New Basics measures should show but inconsequentially small underreporting biases in their results for students in high schools that begin with tenth grade.

PARENTS' EDUCATION: Parents' Education was defined as the highest level of education attained by either parent. This was obtained as the maximum of F2N8A and F2N8B after combining codes 3 (Vocational/Trade/Business School after HS) and 4 (College Program after HS) into a single "Some college" category, and combining codes 6 (Master's Degree or equivalent) and 7 (Ph.D., M.D., or other professional degree) into a single "Graduate Degree" category.

PERCENT MINORITY: Percent Minority was created by grouping respondents into two categories ("less than 50 %" or "50 % or greater") on the basis of F2C22D.

PERCENT RECEIVING FREE- OR REDUCED-PRICE LUNCHES: Respondents were grouped into three categories based on the percent of students at their school receiving free or reduced-price lunches as indicated by F2C25A: "10 % or less," "11 % to 49 %," or "50 % or more."

PLANS FOR NEXT YEAR: If the response to F2S49 indicated that the respondent planned to continue in school immediately following high school (code 1), then "Plans for Next Year" was coded using F2S61, combining codes 3 and 4 of the latter into a single category indicating plans to attend a vocational or trade school. Two additional categories were generated, the first indicating that the respondent did not plan to attend school the next year (as indicated by code 2 or 9 on F2S49), and the second indicating that the respondent was uncertain of his/her plans for the next year (indicated by code 3 on F2S49).

RACE/ETHNICITY: The variable F2RACE1 was used to indicate race/ethnicity; category 5 (American Indian or Alaskan Native) was omitted from the calculations in this report due to inadequate sample size.

SES: Socioeconomic Status was coded as quartiles based on the variable F2SES1. F2SES1 was constructed using base year parent data, when available. The following parent data were used: Father's education level, mother's education level, father's occupation, mother's occupation, and family income (data coming from BYP30, BYP31, BYP34B, BY37B, and BYP80. Education-level data were recoded according to the definition of BYPARED (with the exception of category "7", which was recoded as missing for F2SES1 calculations.) Occupational data were recoded using the Duncan SEI, as used in NLS 72, HS&B, and earlier rounds of NELS:88. Parent data were used to construct F2SES1 if at least one component was not missing. SES quartiles were redrawn for this analysis, to reflect the seniors-only portion of the 1992 NELS:88 sample. For a complete description of the computation and formulae, see the *Second Follow-Up: Student Component Data File User's Manual*, p. H-12.

TYPE OF SCHOOL: (G12CTRL2).

REGION: (G12REGON)

Response Variables: The following variables represent the student's responses to various questionnaire items reported in the Student Component File.

APPLICATIONS TO COLLEGE: The percentage estimates and standard errors in this report were calculated by generating two groups, those responding "none" and those choosing any of the other valid responses for F2S60A.

DRUG AND ALCOHOL USE: The percentage estimates and standard errors in this report were calculated by generating two groups, those coded 0 (zero), and those choosing any of the other valid responses for the following items.

MARIJUANA USE: On how many occasions (if any) have you used marijuana (grass, pot) or hashish (hash, hash oil)?

F2S83A: In your lifetime.
F2S83B: During the last 12 months.
F2S83C: During the last 30 days.

COCAINE USE: On how many occasions (if any) have you used cocaine in any form (including crack)?

F2S84A: In your lifetime.
F2S84B: During the last 12 months.
F2S84C: During the last 30 days.

ALCOHOL USE: On how many occasions (if any) have you had alcoholic beverages to drink?

F2S81A: In your lifetime.
F2S81B: During the last 12 months.
F2S81C: During the last 30 days.

FIVE OR MORE DRINKS:

F2S82: Think back over the LAST TWO WEEKS. How many times have you had five or more drinks in a row? (A "drink" is a glass of wine, a bottle of beer, a shot glass of liquor, or a mixed drink).

ENTRANCE EXAMS TAKEN: The percentage estimates and standard errors in this report were calculated by generating two groups, those responding "yes, I've already taken it" to at least one of the following items, and those choosing any of the other valid responses for all three of the following items.

Have you taken or are you planning to take any of the following tests this year?

F2S44B: College Board Scholastic Aptitude Test (SAT)
F2S44C: American College Testing test (ACT)
F2S44F: Other admissions test

FACTORS CONSIDERED WHEN CHOOSING SCHOOL: The percentage estimates and standard errors in this report were calculated by generating two groups, those responding "very important" and those choosing any of the other valid responses for the following items.

How important is or was each of the following in choosing a school you would like to attend?

F2S59A: Low expenses (tuition, books, room and board).
F2S59B: Availability of financial aid such as a school loan, scholarship or grant.
F2S59C: Availability of specific courses or curriculum.
F2S59D: Strong reputation of the school's athletic programs.
F2S59E: Active social life at the school.
F2S59F: Ability to attend school while living at home.
F2S59G: Chance to live away from home.
F2S59H: A religious environment.
F2S59I: A low-crime environment.
F2S59J: A good record for placing graduates in jobs.
F2S59K: A good record for placing graduates in graduate school.
F2S59L: Strong reputation of the school's academic programs.

F2S59M: Easy admission standards.
F2S59N: Availability of a degree program that will allow me to get a job in my chosen field.
F2S59O: Racial/ethnic composition of the school.
F2S59P: Size of the school.
F2S59Q: Geographic location of the school.
F2S59R: Ability to attend the same school my parents attended.

FIELD MOST LIKELY TO TRAIN IN: (F2S63)

FULL-TIME JOB SET UP: The percentage estimates and standard errors in this report were calculated by generating two groups, the first consisting of those coded 1 or 2, and the second those choosing any of the other valid responses for F2S52.

HOMEWORK OUTSIDE OF SCHOOL: The percentage estimates and standard errors in this report for this variable were calculated by generating three groups, those coded 00 or 01 (none or less than 1 hour), those coded 2 or 3 (1 - 6 hours), and those with a valid response code of 4 or greater (7 or more hours) on variable F2S25F2.

MAJOR FIELD OF STUDY: (F2S62)

PARTICIPATION IN STUDENT GOVERNMENT: The percentage estimates and standard errors in this report were calculated by generating two groups, the first consisting of those coded 3 or 4, and the second those choosing any of the other valid responses for F2S30BC.

PARTICIPATION IN COMMUNITY SERVICE: (F2S37)

PEER VALUES: The percentage estimates and standard errors in this report were calculated by generating two groups, those responding "very important" and those choosing any of the other valid responses for the following items.

Among your close friends, how important is it to them that they:

F2S68A: Attend classes regularly?
F2S68B: Study?
F2S68C: Play sports?
F2S68D: Get good grades?
F2S68E: Be popular/well-liked by others?
F2S68F: Finish high school?
F2S68G: Have a steady boyfriend/girlfriend?
F2S68H: Continue their education past high school?
F2S68I: Participate in religious activities?
F2S68J: Do community work or volunteering?
F2S68K: Have a regular job?
F2S68L: Get together with friends?
F2S68M: Go to parties?
F2S68N: Have sexual relations?
F2S68O: Use drugs?
F2S68P: Drink alcoholic beverages?
F2S68Q: Make money?

PERCEPTIONS OF SCHOOL ENVIRONMENT: The percentage estimates and standard errors in this report were calculated by generating two groups, those responding "strongly agree" and those choosing any of the other valid responses for the following items.

F2S7C: The teaching is good at this school.
F2S7D: The teachers are interested in students.
F2S7I: The students are graded fairly.
F2S7E: I don't feel safe at this school.
F2S7G: Fights often occur between different racial or ethnic groups.
F2S7H: There are many gangs at school.

TELEVISION VIEWING: (F2S35A F2S35B)

TYPE OF SCHOOL MOST LIKELY TO ATTEND: (F2S61)

VICTIMIZATION: The percentage estimates and standard errors in this report were calculated by generating two groups, those responding "never" and those choosing any of the other valid responses for the following items.

F2S8A: I had something stolen from me at school.
F2S8B: Someone offered to sell me drugs at school.
F2S8D: Someone threatened to hurt me at school.

WILL CONTINUE SCHOOL IMMEDIATELY: (F2S49)

WORK:

F2S86A: Have you ever worked for pay, not including work around the house?

The percentage estimates and standard errors in this report for this question were calculated by generating two groups, those responding "no" and those choosing any of the other valid responses.

F2S88: How many hours do/did you usually work each week on your current or most recent job during this school year?

The percentage estimates and standard errors in this report for this question were calculated by generating three groups, those coded 00 (I have not worked during this school year), those coded 1 through 4 (20 hours or less), and those with a valid response code of 5 or greater (more than 20 hours).

Transcript Variables: The following variables were taken from the Transcript Component Student File.

AVERAGE GRADES IN SUBJECTS: The average grades received in subject areas classified using HSB definitions are found in the following variables.

F2RHEN_G:	Average grade in English
F2RHMA_G:	Average grade in Mathematics
F2RHSC_G:	Average grade in Science
F2RHSO_G:	Average grade in Social Science
F2RHFO_G:	Average grade in Foreign Language
F2RHCO_G:	Average grade in Computer Science

These variables, originally coded on a 13-point scale, were recoded and used as a classification variable as follows.

1.00 through 3.50 = A
3.51 through 6.50 = B
6.51 through 9.50 = C
9.51 through 12.00 = D
12.01 through 13.00 = F

The F category was dropped from analysis due to insufficient sample size.

COURSEWORK TAKEN: F2RENG_C - F2RCOM_C

TESTED ACHIEVEMENT

This report utilized results from three of the four NELS:88 achievement tests: reading, mathematics and science. While both normative (achievement quartile) and criterion-referenced (proficiency) scores are available for these subjects, only the mastery level (proficiency) scores were used in this report. The specific scores reported are as follows:

PROFICIENCY:

IN READING (F2TXRPRO)
IN MATH (F2TXMPRO)
IN SCIENCE (F2TXSPRO)

PROFICIENCY IN ALL AREAS: A respondent was coded "proficient in all areas" if he or she had valid non-zero values for F2TXRPL1, F2TXMPL1, and F2TXSPL1. If any of these variables was coded zero, the respondent was coded "not proficient in all areas."

The four NELS:88 achievement tests were designed to reflect learning in high school subjects but not be tied to any single method of instruction or any individual curriculum. Central emphasis was placed on general concepts and the development of problem-solving abilities, rather than on highly specific curriculum content--given the heterogeneity of the high school curriculum, the two year interval between testing, and the problem, for gain measurement, of "forgetting" if tests emphasize curriculum-related knowledge that is highly specific. To make them more adaptive and increase the precision of measurement, two of the tests--reading and mathematics--had multiple forms or levels; assignment to a high or low form of the 1992 test was based on performance on the 1990 test. Table B.1 supplies curriculum content and mastery or process specifications for the three tests used in this report. Further information about the NELS:88 achievement test data may be found in the *NELS:88 Second Follow-Up Student Component Data File User's Manual* (S.J. Ingels et al. 1994, NCES 93-374). Further information about test construction and the psychometric properties of the tests can be found in the *NELS:88 Base Year Through Second Follow-Up Psychometric Report* (D.A. Rock and J. Pollack 1995, NCES 94-382).

Table B.1
NELS:88 Reading Specifications
Content by Process by Test Forms
(Number of Items)

Process	Literary	Science	Social Studies/Other
Reproduction of Detail			
8th Grade	3	1	-
10th Grade Low	3	1	-
10th Grade High	2	1	1
12th Grade Low	3	1	1
12th Grade High	-	-	1
Comprehension of Thought			
8th Grade	1	1	1
10th Grade Low	1	1	1
10th Grade High	3	1	2
12th Grade Low	-	2	4
12th Grade High	-	1	8
Inferences and/or Evaluative Judgements			
8th Grade	10	1	3
10th Grade Low	10	1	3
10th Grade High	9	1	1
12th Grade Low	6	1	3
12th Grade High	4	3	3

Reliability for 1992 Reading Test (IRT theta estimates) = .85.

Table B.1 (Cont'd)
NELS:88 Math Specifications
Content by Process by Test Forms
(Number of Items)

Process	Arithmetic	Algebra	Geometry	Data/Prob	Adv Topic
Skill/Knowledge					
8th Grade	10	5	1	1	-
10th Grade Low	12	4	2	-	-
10th Grade Med	9	3	-	1	1
10th Grade High	6	3	-	2	2
12th Grade Low	10	4	2	-	-
12th Grade Med	7	2	-	1	1
12th Grade High	1	2	-	1	2
Under/Comprehen					
8th Grade	6	7	3	3	-
10th Grade Low	7	6	3	2	-
10th Grade Med	6	6	3	2	-
10th Grade High	3	7	2	3	2
12th Grade Low	6	5	3	3	-
12th Grade Med	4	6	4	2	-
12th Grade High	1	5	7	1	3
Problem Solving					
8th Grade	3	-	-	-	1
10th Grade Low	3	-	-	-	1
10th Grade Med	3	2	2	-	2
10th Grade High	2	2	3	-	2
12th Grade Low	4	-	2	-	1
12th Grade Med	4	3	5	-	1
12th Grade High	2	4	9	1	1

Reliability for 1992 Mathematics Test (IRT theta estimates) = .94.

Table B.1 (Cont'd)
NELS:88 Science Specifications
Content by Process by Test Forms
(Number of Items)

Process	Earth Sci	Chem	Sci Meth	Life Sci	Phy Sci
Skill/Knowledge					
8th Grade	5	2	-	3	-
10th Grade	3	2	-	2	1
12th Grade	3	3	-	3	1
Under/Comprehen					
8th Grade	2	2	1	2	-
10th Grade	2	1	1	2	1
12th Grade	1	-	3	1	-
Problem Solving					
8th Grade	1	3	2	2	-
10th Grade	-	3	1	3	2
12th Grade	-	3	1	2	4

Reliability for 1992 Science Test (IRT theta estimates) = .82.

Appendix C: Methodology Used in Report

Appendix C. Methodology Used in Report

Sample Used for Analysis. The NELS:88 contains five representative samples, three cross-sectional and two panel samples. The three cross-sectional samples are: 1988 eighth graders, 1990 sophomores, and 1992 seniors. The two panel samples are: 1988 eighth graders in 1990 and 1992 and 1990 sophomores in 1992. The analysis in this paper is based on data from the cross-section of 1992 seniors. This sample comprises 16,114 cases selected using F2SEQFLG=0.

Estimates in this report pertain to the population of high school seniors in the fifty states and the District of Columbia in the spring term of the 1991-92 school year. "Early graduates" who completed high school ahead of their class are not included. Seniors in 1992 who in fact failed to graduate in the spring term are included (graduating seniors can be distinguished from seniors through transcript data). All estimates are approximations that are subject to sampling error.

Weighted racial-ethnic proportions are based on student self-identification and may differ slightly from other sources (for example, most sources estimate Asians as a smaller proportion of the population than does NELS:88). Such differences may be attributed to any of several factors, including differences in the population definition (for example, age cohort versus students in school in senior year spring 1992), the data source (e.g., household or student self report versus teacher report or school records), or margins of sampling error arising from comparison of one weighted estimate to another.

All analyses using variables taken from the student questionnaire were conducted using F2QWT. Analyses based on the contextual sample, using data contained in the school or transcript files, were conducted using the contextual weight, F2CXTWT. All analyses using transcript variables in this report are based on the responses of **all seniors** for whom transcripts were collected.

Statistical Procedures. Comparisons that have been drawn in the text of this report have been tested for statistical significance to ensure that the differences are larger than those that might be expected due to sampling variation. The statistical comparisons in this report were based on the *t* statistic. Generally, whether the statistical test is considered significant or not is determined by calculating a *t* value for the difference between a pair of means or proportions and comparing this value to published tables of values at certain critical levels, called "alpha levels." The alpha level is an *a priori* statement of the probability that a difference exists in fact rather than by chance.

To guard against errors of inference based upon multiple comparisons, the Bonferroni procedure[53] to adjust significance tests for multiple contrasts was used. This method corrects the significance (or alpha) level for the total number of contrasts made with a particular classification variable. For each classification variable, there are (K*[K-1])/2 possible contrasts (or nonredundant pairwise comparisons), where K is the number of categories. For example, if a classification variable such as race has five categories, K=5 and there are (5*4)/2=10 possible comparisons between the categories. The Bonferroni procedure divides the alpha-level for a single *t*-test (in this case, 0.05; .025 is sometimes used if a two-tailed test is required) by the number of possible pairwise comparisons (10) to derive a new alpha corrected for the fact that multiple contrasts are being made.

---

[53] For detailed discussion, see, for example, Hays, W.L. (1988). *Statistics*. (4th ed.) New York: Holt, Rinehart, Winston.

The *t* statistic between estimates from various subgroups presented in the tables can be computed by using the following formula:

$$t=\frac{X_1-X_2}{\sqrt{SE_1^2+SE_2^2}}$$

where X_1 and X_2 are the estimates to be compared and SE_1 and SE_2 are their corresponding standard errors.

Standard errors for all tables are included in Appendix Two. All standard errors have been calculated using a Taylor series linearization to adjust for the effects of the complex survey design. CTAB and SUDAAN programs were used to calculate these estimates. Because NELS:88 sampling employed a multi-stage stratified cluster design, the adjusted standard errors are generally higher than those that would be calculated using normal simple random sampling assumptions.

Appendix D: Data for Figures

Table D1.1
Standard Errors for Percentages of 1992 High School Seniors Whose Parents Have Completed Various Levels of Education

Standard Errors for This Figure Can Be Found in Table E1.1

Table D1.2
Standard Errors for Percentages of 1992 High School Seniors in Various Racial and Ethnic Groups

	SE	UNWEIGHTED N
Asian/Pacific Islander	.31	1172
Hispanic	.69	1909
Black	.78	1499
White	1.08	11308

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table D1.3
Standard Errors for Percentages of 1992 High School Seniors Whose Native Language is English by Race/Ethnicity

TOTAL	**0.64**
RACE/ETHNICITY	
Asian/Pacific Islander	2.98
Hispanic	2.95
Black	1.18
White	0.22

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table D1.4
Standard Errors for Percentages of 1992 High School Seniors in Various Racial and Ethnic Groups by Social Class

	LOW	MIDDLE	HIGH	UNWEIGHTED N
TOTAL	0.73	0.69	0.83	15910
Race/Ethnicity				
Asian/Pacific Islander	2.44	2.65	2.48	1155
Hispanic	2.07	1.76	1.17	1848
Black	2.50	2.22	1.09	1483
White	0.67	0.79	0.97	11243

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table DI.5
Standard Errors for Percentages of 1992 High School Seniors Attending Various Types of Schools

Data for This Figure Can Be found in Table E1.3

Table D2.1
Standard Errors for Percentages of 1992 High School Seniors Who Report That Close Friends Feel Various Activities are Very Important

	SE	UNWEIGHTED N
To Attend Class Regularly	.69	7825
To Study	.64	5532
To Play Sports	.53	3280
To Get Good Grades	.65	7248
To Be Popular with Students	.59	4267
To Finish High School	.50	12586
To Have Steady Boy/Girl Friend	.45	2174
To continue Education Past High School	.66	9039
To Participate in Religious Activity	.38	1409
To do Community Volunteer Work	.22	606
To Have a Job	.59	4054
To get Together with Friends	.72	8905
To Go to Party	.63	5404
To Have Sexual Relations	.54	2978
To Use Drugs	.21	489
To Drink	.38	1563
To Make Money	.65	7818

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table D3.1
Standard Errors for Percentages of 1992 High School Seniors Completing Coursework in Various Subjects

	SE	UNWEIGHTED N
English	.08	14048
Foreign Language	.93	10821
Math	.14	14007
Algebra I	.69	11095
Algebra II	1.07	7575
Geometry	.93	10238
Trigonometry	.88	3076
Pre-Calculus	.92	2768
Calculus	.72	1867
Other Math	1.05	5003
Science	0.16	14007
Earth Science	1.06	3101
Biology	0.39	13208
Chemistry	1.02	8203
Physics	0.98	4035
Other Science	1.39	8551
Social Studies	.09	14043
History	.22	13881
Other Social Studies	.51	13208
Computer Science	1.13	8073

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table D4.1
Standard Errors for Percentages of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Reading

Table D4.2
Standard Errors for Percentages of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Mathematics

Table D4.3
Standard Errors for Percentages of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Science

Data can be found in Table E4.1a, E4.1b and E4.1c

Table D5.1
Standard Errors for Percentages of 1992 High School Seniors Who Consider Various Factors to Be Important in Selecting a College

	SE	UNWEIGHTED N
College Expense	.69	4246
Financial Aid	.74	6464
Specific Courses	.63	9145
Athletic Programs	.34	1461
Social Life	.56	3263
Live at Home	.52	2675
Not Live at Home	.57	3537
Religious Environment	.34	985
Low Crime Environment	.61	4576
Job Placement	.66	7765
Grad School Placement	.66	5380
Reputation of College	.68	7580
Easy Admissions Standards	.48	2387
Degree Important to Get Job	.63	9753
Ethnic Composition	.44	1410
Size of School	.43	2153
Location of School	.57	3099
Same School as Parent	.13	235

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table D6.1a
Data for Figure 6.1: Educational Expectations held by 1992 High School Seniors by Gender

How far in school respondent thinks he/she will get:	High School or Less	Some College	College Degree	Graduate Degree	Don't Know
Males	6.3	24.3	33.8	29.1	6.4
Females	3.8	23.5	34.5	33.8	4.5

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table D6.1b
Standard Errors for Figure 6.1: Educational Expectations held by 1992 High School Seniors by Gender

How far in school respondent thinks he/she will get:	High School or Less		Some College		College Degree		Graduate Degree		Don't Know	
	SE	N	SE	N	SE	N	SE	N	SE	N
Males	.39	451	.75	1759	.83	2593	.94	2392	.51	472
Females	.29	280	.77	1753	.86	2587	.86	2898	.32	351

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table D6.2a
Data for Figure 6.2: Percent of 1992 High School Seniors Most Likely to Study Various Academic Fields by Gender

	Males	Females
Agriculture	2.0	0.5
Architecture	2.4	0.8
Art	2.8	2.9
Biological Sciences	2.5	2.8
Business	13.7	13.8
Communications	2.7	3.2
Computer & Info Science	2.8	1.7
Education	3.6	10.1
Engineering	11.8	2.0
English	1.2	2.0
Ethnic Studies	0.0	0.4
Foreign Languages	0.2	0.7
Health Occupations	2.8	11.4
Home Economics	0.1	1.2
Interdisciplinary Studies	0.2	0.2
Mathematics	0.7	0.6
Music	1.7	1.1
Philosophy	0.5	0.1
Physical Science	1.5	1.0
Pre-Professional	6.8	7.8
Psychology	1.8	6.2
Social Sciences	3.3	4.0
Other	8.9	6.1
No College Plans	25.9	19.2

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table D6.2b
Standard Errors for Percentages of 1992 High School Seniors Most Likely to Study Various Academic Fields by Gender

	Males		Females	
	SE	N	SE	N
Agriculture	.22	143	.09	46
Architecture	.23	189	.13	64
Art	.24	226	.28	246
Biological Sciences	.24	208	.26	231
Business	.63	1076	.53	1097
Communications	.29	200	.32	241
Computer & Info Science	.29	201	.30	123
Education	.31	244	.46	772
Engineering	.57	939	.21	166
English	.20	105	.27	173
Ethnic Studies	.02	4	.32	11
Foreign Languages	.06	23	.11	71
Health Occupations	.27	214	.62	833
Home Economics	.03	9	.18	85
Interdisciplinary Studies	.07	14	.06	19
Mathematics	.15	41	.11	53
Music	.21	134	.18	76
Philosophy	.14	34	.03	12
Physical Science	.17	150	.13	103
Pre-Professional	.62	523	.43	664
Psychology	.24	149	.47	473
Social Sciences	.37	290	.30	346
Other	.46	655	.41	451
No College Plans	.92	1782	.70	1398

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table D6.3a
Data for Figure 6.3: Percent of 1992 High School Seniors Most Likely to Pursue Various Types of Non-Academic Training by Gender

	Males	Females
Agriculture	0.6	0.2
Auto Mechanics	3.7	0.1
Aviation	0.8	0.1
Accounting	0.4	1.0
Business Management	0.9	1.0
Secretarial & Related	0.0	2.2
Other Business & Office	0.4	0.5
Commercial Arts	0.8	0.7
Computer Programming/DP	1.0	1.1
Construction Trades	1.3	0.0
Cosmetology/Hair Styling	0.1	2.4
Drafting	1.0	0.2
Electronics	2.1	0.2
Food Services	0.3	0.5
Health Care	0.4	3.0
Home Economics	0.0	0.6
Hotel & Restaurant Management	0.2	0.2
Marketing & Distribution	0.2	0.2
Metal Working	1.0	0.0
Protective Services	0.9	0.2
Refrigeration, Heating & A.C.	0.4	0.0
Transportation & Material Moving	0.3	0.0
Other	3.1	2.1
Plan to Attend College	79.6	83.5

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table D6.3b
Standard Errors for Percentages of 1992 High School Seniors Most Likely to Pursue Various Types of Non-Academic Training by Gender

	Males		Females	
	SE	N	SE	N
Agriculture	.09	44	.05	12
Auto Mechanics	.43	240	.03	6
Aviation	.15	54	.06	8
Accounting	.10	25	.13	77
Business Management	.15	65	.14	73
Secretarial & Related	NA	NA	.19	176
Other Business & Office	.24	15	.10	38
Commercial Arts	.14	56	.11	51
Computer Programming/DP	.16	67	.15	86
Construction Trades	.16	99	NA	NA
Cosmetology/Hair Styling	.04	10	.23	165
Drafting	.16	73	.07	9
Electronics	.21	168	.05	13
Food Service	.10	24	.22	17
Health Care	.09	39	.25	242
Home Economics	NA	NA	.12	42
Hotel & Restaurant Management	.13	10	.06	17
Marketing & Distribution	.11	14	.05	20
Metal Working	.16	73	.00	0
Protective Services	.12	72	.05	21
Refrigeration, Heating & A.C.	.18	45	NA	NA
Transportation & Material Moving	.11	18	.02	3
Other	.35	212	.20	177
Plan to attend College	.80	6216	.63	6564

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table D6.4a
Data for Table 6.4: Percent of 1992 High School Seniors Expecting to Have Various Occupations at Age 30 by Gender

	Males	Females
Office Worker	1.1	5.1
Tradesperson	4.7	0.3
Farmer	1.4	0.3
Full-Time Homemaker	0.1	2.0
Laborer	1.2	0.1
Manager	5.9	4.8
Military	5.0	0.8
Machine Operator	1.9	0.2
Elementary/Secondary School Teacher	4.1	10.7
Professional I*	24.0	30.7
Professional II**	15.8	20.0
Small Business Owner	7.8	4.3
Protective Services	6.2	1.3
Sales	2.0	1.4
Service Worker	0.5	4.2
Technical	7.4	3.3
Not Planning to Work	0.2	0.2
Other	10.3	10.2
Will Be in School	0.4	0.4

* Professional I = Accountant, Registered Nurse, Engineer, Banker, Librarian, Writer, Social Worker, Actor, Athlete, Artist, Politician, but not Including School Teacher.

** Professional II = Minister, Dentist, Doctor, Lawyer, Scientist, College Teacher.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table D6.4b
Standard Errors for Percentages of 1992 High School Seniors Expecting to Have Various Occupations at Age 30 by Gender

	Males		Females	
	SE	N	SE	N
Office Worker	.14	84	.33	391
Tradesperson	.30	343	.08	21
Farmer	.17	108	.10	23
Full-Time Homemaker	.04	8	.22	145
Laborer	.17	88	.03	10
Manager	.44	424	.33	381
Military	.51	323	.15	46
Machine Operator	.25	123	.08	9
Elementary/Secondary School Teacher	.33	304	.46	830
Professional I*	.82	1862	.84	2277
Professional II**	.71	1323	.73	1738
Small Business Owner	.46	591	.31	314
Protective Services	.36	450	.17	103
Sales	.32	144	.17	113
Service Worker	.15	33	.29	291
Technical	.42	557	.32	241
Not Planning to Work	.08	20	.05	17
Other	.52	752	.60	759
Will Be in School	.11	18	.26	11

* Professional I = Accountant, Registered Nurse, Engineer, Banker, Librarian, Writer, Social Worker, Actor, Athlete, Artist, Politician, but not Including School Teacher.

** Professional II = Minister, Dentist, Doctor, Lawyer, Scientist, College Teacher.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table D6.5a
Data for Figure 6.5: Percent of 1992 High School Seniors Indicating Level of Education Necessary for Job They Expect to Have at Age 30 by Gender

	High School or Less	Some College	College Degree	Graduate Degree	Don't Know
Males	7.9	26.6	38.1	27.1	0.3
Females	3.5	23.9	39.0	32.9	0.6

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table D6.5b
Standard Errors for Percentages of 1992 High School Seniors Indicating Level of Education Necessary for Job They Expect to Have at Age 30 by Gender

	High School or Less		**Some College**		**College Degree**		**Graduate Degree**		**Don't Know**	
	SE	**N**	**SE**	**N**	**SE**	**N**	**SE**	**N**	**SE**	**N**
Males	.58	523	.84	1816	.90	2879	.97	2230	.10	22
Females	.33	236	.75	1739	.83	2896	.84	2811	.13	46

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table D7.1
Standard Errors for Percentages of 1992 High School Seniors Reporting Various Amounts of Television Viewing by Race/Ethnicity

Table D7.2
Standard Errors for Percentages of 1992 High School Seniors Reporting Various Amounts of Television Viewing by Class Rank

Data for These Figures Can Be Found in Table E7.3

Appendix E: Standard Errors and Sample Sizes for Tables

Table E1.1
Standard Errors for Highest Level of Parents' Education for 1992 High School Seniors by Race

	LT. HS	High School	Some College	College Degree	Graduate Degree	Unweighted N
TOTAL	0.42	0.67	0.57	0.54	0.65	14594
Race/Ethnicity						
Asian/Pacific Islander	1.36	2.72	1.85	2.19	2.25	967
Hispanic	2.18	1.72	1.47	1.08	1.20	1597
Black	1.12	2.16	2.18	1.45	1.11	1318
White	0.32	0.78	0.62	0.64	0.78	10557

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table E1.2
Standard Errors for Percentages of 1992 High School Seniors in Each Region by Race

	Northwest	Midwest	South	West	Unweighted N
TOTAL	0.85	0.79	0.80	0.73	16088
Race/Ethnicity					
Asian/Pacific Islander	2.74	1.93	2.28	3.67	1166
Hispanic	1.97	1.44	2.86	3.39	1898
Black	1.89	1.81	2.78	1.40	1495
White	1.18	1.08	1.07	0.90	11303

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table E1.3
Standard Errors for Percentages of 1992 High School Seniors Attending Various Types of Schools

	Type of School					Location				Percent Receiving Subsidized Lunch				Percent Minority	
	Public	Catholic	NAIS Private	Other Private	N	Urban	Suburban	Rural	N	0-10	11-49	50-100	N	SE	N
	SE	SE	SE	SE		SE	SE	SE		SE	SE	SE			
Total	0.62	0.45	0.18	0.35	16085	1.32	1.61	1.56	16055	1.72	1.71	.98	14568	1.38	14647
Race/Ethnicity															
Asian	3.34	2.14	0.42	2.88	1166	4.00	3.69	1.64	1161	4.00	3.55	3.07	1059	3.86	1039
Hispanic	1.69	1.42	0.06	0.65	1898	3.75	3.32	3.85	1895	2.61	3.95	4.62	1712	3.25	1742
Black	1.33	1.31	0.22	0.06	1495	3.51	3.29	2.66	1493	2.56	3.35	2.87	1337	3.41	1336
White	0.77	0.56	0.24	0.42	11303	1.20	1.80	1.81	11280	1.98	1.95	.69	10276	.85	10346
Socioeconomic Status															
Low	0.44	0.42	0.02	0.12	3865	1.89	1.88	2.09	3863	1.76	2.26	2.07	3487	2.27	3518
Middle	0.69	0.55	0.05	0.42	7481	1.45	1.80	1.68	7466	1.96	1.96	0.95	6771	1.44	6825
High	1.59	1.02	0.69	1.07	4540	1.83	2.12	1.69	4525	2.24	2.17	0.69	4156	1.88	4148

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table E2.1
Standard Errors for Percentages of 1992 High School Seniors Who Agree with Statements about Teaching and Grading

	The teaching is Good at School		Teachers are interested in Students		Students are graded fairly in School	
Standard Errors	**SE**	**N**	**SE**	**N**	**SE**	**N**
Total	0.42	15855	0.5	15865	0.5	15808
Gender						
Male	0.56	7872	0.66	7884	0.68	7852
Female	0.58	7983	0.67	7981	0.69	7956
Race/Ethnicity						
Asian/Pacific Islander	1.55	1152	1.94	1155	2.18	1152
Hispanic	0.98	1869	1.23	1872	1.36	1868
Black	1.48	1454	1.86	1460	1.89	1449
White	0.5	11158	0.55	11157	0.54	11117
Socioeconomic Status						
Low	0.74	3813	0.96	3822	1.05	3797
Middle	0.56	7386	0.69	7389	0.69	7372
High	0.86	4461	0.82	4460	0.82	4446
Parents' Education						
Less than High School	1.18	1261	1.54	1264	1.55	1256
High School	0.76	3941	0.93	3941	1.04	3928
Some College Work	0.83	3352	1.05	3360	0.95	3346
Completed College	0.84	2786	1.04	2784	1.04	2780
Graduate Degree	1.01	3031	0.92	3027	1.0	3020
Region						
Northeast	1.11	3085	1.27	3083	1.04	3077
Midwest	0.76	4180	0.91	4180	0.98	4163
South	0.72	5337	0.89	5341	0.88	5320
West	0.79	3230	1.02	3238	1.1	3225

Table E2.1
Standard Errors for Percentages of 1992 High School Seniors Who Agree with Statements about Teaching and Grading (Cont'd)

	The teaching is Good at School		**Teachers are interested in Students**		**Students are graded fairly in School**	
Standard Errors	**SE**	**N**	**SE**	**N**	**SE**	**N**
Tested Proficiency						
Below basic in at least one area	1.05	2505	1.17	2514	1.29	2496
At least basic in all areas	0.51	10314	0.58	10313	0.6	10285
Native Language						
English	0.44	13572	0.53	13579	0.53	13534
Non-English	1.23	1850	1.39	1852	1.61	1841
High School Program						
General	0.65	5720	0.85	5723	0.82	5704
College Preparatory	0.54	7580	0.66	7579	0.66	7558
Vocational	1.11	1716	1.18	1719	1.52	1711
Class Rank						
Highest Quarter	0.83	3650	0.86	3650	0.83	3640
Third Quarter	0.76	3199	1.14	3205	1.22	3188
Second Quarter	0.97	2853	1.3	2851	1.39	2840
Lowest Quarter	1.42	2273	1.46	2277	1.82	2270
Urbanicity of School						
Urban	0.95	4549	0.96	4554	1.12	4535
Suburban	0.64	6388	0.81	6391	0.73	6367
Rural	0.67	4865	0.79	4867	0.83	4853
Type of School						
Public	0.43	13548	0.54	13563	0.52	13510
Catholic	1.7	902	1.38	901	1.9	900
NAIS Private	0.29	1020	0.49	1018	1.03	1014
Other Private	2.84	362	1.83	360	2.1	361

Table E2.1
Standard Errors for Percentages of 1992 High School Seniors Who Agree with Statements about Teaching and Grading (Cont'd)

	The teaching is Good at School		Teachers are interested in Students		Students are graded fairly in School	
Standard Errors	**SE**	**N**	**SE**	**N**	**SE**	**N**
Percent Receiving Subsidized Lunch						
10% or Less	0.63	6514	0.8	6507	0.96	6491
11% to 49%	0.74	6372	0.92	6385	0.94	6359
50% or More	1.3	1469	1.62	1473	1.88	1461

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table E2.2
Standard Errors for Percentages of 1992 High School Seniors Who Agree with Statements About School Safety

	Respondent Doesn't Feel Safe at School		Fights Occur Between Racial/ Ethnic Groups		There are Many Gangs in School	
Standard Errors	**SE**	**N**	**SE**	**N**	**SE**	**N**
Total	0.38	15872	0.68	15858	0.63	15835
Gender						
Male	0.51	7885	0.81	7877	0.74	7873
Female	0.52	7987	0.82	7981	0.74	7962
Race/Ethnicity						
Asian/Pacific Islander	1.91	1155	2.37	1153	2.63	1151
Hispanic	1.38	1874	1.95	1875	2.47	1871
Black	1.35	1466	1.66	1464	1.77	1460
White	0.39	11155	0.76	11145	0.56	11133
Socioeconomic Status						
Low	0.76	3818	1.09	3822	1.13	3813
Middle	0.5	7395	0.84	7386	0.74	7377
High	0.68	4464	1.04	4456	0.82	4451
Parents' Education						
Less than High School	1.41	1261	2.	1262	1.8	1262
High School	0.66	3943	1.04	3945	0.91	3936
Some College Work	0.65	3360	1.07	3355	1.02	3349
Completed College	0.82	2788	1.16	2780	0.98	2780
Graduate Degree	0.66	3030	1.18	3029	0.93	3023
Region						
Northeast	1.05	3084	1.92	3078	1.26	3071
Midwest	0.58	4186	1.21	4180	1.03	4179
South	0.66	5344	1.07	5341	1.02	5340
West	0.79	3235	1.5	3237	1.82	3223

Table E2.2
Standard Errors for Percentages of 1992 High School Seniors Who Agree with Statements About School Safety (Cont'd)

	Respondent Doesn't Feel Safe at School		Fights Occur Between Racial/ Ethnic Groups		There are Many Gangs in School	
Standard Errors	**SE**	**N**	**SE**	**N**	**SE**	**N**
Tested Proficiency						
Below basic in at least one area	0.93	2512	1.42	2511	1.33	2502
At least basic in all areas	0.43	10320	0.79	10316	0.67	10305
Native Language						
English	0.38	13585	0.71	13573	0.57	13557
Non-English	1.57	1852	2.11	1851	2.39	1845
High School Program						
General	0.58	5721	0.9	5722	0.87	5710
College Preparatory	0.52	7586	0.86	7576	0.72	7572
Vocational	1.08	1721	1.62	1720	1.5	1714
Class Rank						
Highest Quarter	0.67	3651	1.19	3648	1.07	3644
Third Quarter	1.	3205	1.23	3202	1.06	3196
Second Quarter	1.	2855	1.51	2855	1.52	2849
Lowest Quarter	0.95	2274	1.73	2278	1.36	2277
Urbanicity of School						
Urban	0.95	4560	1.24	4555	1.54	4541
Suburban	0.52	6394	1.12	6386	0.91	6378
Rural	0.52	4865	1.14	4865	0.62	4864
Type of School						
Public	0.4	13568	0.75	13559	0.69	13542
Catholic	1.08	901	1.29	901	1.31	899
NAIS Private	0.66	1019	0.66	1020	0.46	1017
Other Private	1.66	361	1.7	356	0.72	355

Table E2.2
Standard Errors for Percentages of 1992 High School Seniors Who Agree with Statements About School Safety (Cont'd)

	Respondent Doesn't Feel Safe at School		Fights Occur Between Racial/ Ethnic Groups		There are Many Gangs in School	
Standard Errors	**SE**	**N**	**SE**	**N**	**SE**	**N**
Percent Receiving Subsidized Lunch						
10% or Less	0.47	6509	1.11	6503	0.72	6489
11% to 49%	0.82	6389	1.26	6381	1.23	6374
50% or More	1.72	1473	2.39	1473	3.16	1467

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table E2.3
Standard Errors for Percentages of 1992 High School Seniors Who Report being Victimized at School

	Respondent had something stolen at school		Someone Offered to sell Respondent Drugs at School		Someone Threatened to Hurt Respondent At School	
Standard Errors	**SE**	**N**	**SE**	**N**	**SE**	**N**
Total	0.61	15910	0.47	15901	0.45	15894
Gender						
Male	0.89	7913	0.71	7910	0.71	7909
Female	0.73	7997	0.56	7991	0.47	7985
Race/Ethnicity						
Asian/Pacific Islander	2.13	1162	1.43	1162	1.57	1160
Hispanic	1.9	1881	1.48	1879	1.21	1879
Black	2.01	1470	1.1	1469	1.26	1468
White	0.69	11176	0.54	11170	0.55	11166
Socioeconomic Status						
Low	1.1	3832	0.81	3829	0.69	3826
Middle	0.8	7412	0.68	7406	0.62	7404
High	1.27	4471	0.77	4471	0.93	4469
Parents' Education						
Less than High School	1.75	1266	1.16	1264	1.01	1262
High School	0.98	3959	0.86	3955	0.75	3956
Some College Work	1.11	3366	0.78	3365	0.84	3365
Completed College	1.3	2789	0.96	2787	0.98	2785
Graduate Degree	1.66	3036	1.23	3036	1.16	3033
Region						
Northeast	1.36	3090	0.98	3090	1.09	3088
Midwest	1.1	4190	1.05	4186	0.87	4186
South	1.04	5359	0.71	5357	0.79	5352
West	1.4	3247	1	3244	1.01	3244

Table E2.3
Standard Errors for Percentages of 1992 High School Seniors Who Report being Victimized at School (Cont'd)

	Respondent had something stolen at school		Someone Offered to sell Respondent Drugs at School		Someone Threatened to Hurt Respondent At School	
Standard Errors	**SE**	**N**	**SE**	**N**	**SE**	**N**
Tested Proficiency						
Below basic in at least one area	1.4	2520	1.05	2519	0.96	2515
At least basic in all areas	0.7	10345	0.57	10340	0.53	10338
Native Language						
English	0.62	13611	0.5	13603	0.47	13598
Non-English	1.89	1863	1.26	1862	1.24	1861
High School Program						
General	0.89	5737	0.67	5734	0.74	5729
College Preparatory	0.89	7606	0.68	7602	0.65	7599
Vocational	1.55	1727	1.08	1726	1.07	1726
Class Rank						
Highest Quarter	1.33	3657	0.81	3655	0.84	3655
Third Quarter	1.47	3214	1.81	3213	0.91	3212
Second Quarter	1.64	2859	1.49	2858	1.29	2855
Lowest Quarter	1.69	2289	1.73	2285	1.63	2284
Urbanicity of School						
Urban	1.24	4567	0.9	4566	0.97	4562
Suburban	0.92	6408	0.78	6406	0.7	6405
Rural	1.02	4881	0.67	4875	0.72	4873
Type of School						
Public	0.61	13599	0.5	13591	0.48	13585
Catholic	2.51	903	1.7	903	1.37	903
NAIS Private	7.7	1022	3.23	1021	4.04	1021
Other Private	6.21	362	0.89	362	4.31	361

Table E2.3
Standard Errors for Percentages of 1992 High School Seniors Who Report being Victimized at School (Cont'd)

	Respondent had something stolen at school		Someone Offered to sell Respondent Drugs at School		Someone Threatened to Hurt Respondent At School	
Standard Errors	**SE**	**N**	**SE**	**N**	**SE**	**N**
Percent Receiving Subsidized Lunch						
10% or Less	1.44	6527	1.21	6525	0.99	6525
11% to 49%	1.03	6400	0.8	6396	0.78	6388
50% or More	2.36	1478	2.39	1476	2.18	1478

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table E2.4
Standard Errors for Percentages of 1992 High School Seniors Who Report that Close Friends Feel Various Academic Activities are Very Important

	Important to Attend Classes Regularly		Important to Get Good Grades		Important to Study	
Standard Errors	**SE**	**N**	**SE**	**N**	**SE**	**N**
Total	0.7	14965	0.66	14927	0.66	14949
Gender						
Male	0.94	7331	0.94	7313	0.86	7322
Female	0.93	7634	0.9	7614	0.91	7627
Race/Ethnicity						
Asian/Pacific Islander	2.25	1070	2.5	1066	2.41	1069
Hispanic	1.91	1666	1.82	1662	1.66	1664
Black	2.09	1307	2.04	1299	2.02	1303
White	0.82	10718	0.79	10697	0.79	10709
Socioeconomic Status						
Low	1.21	3477	1.15	3466	1.1	3471
Middle	0.98	7045	0.89	7032	0.91	7040
High	1.31	4275	1.44	4264	1.44	4271
Parents' Education						
Less than High School	1.91	1140	2.04	1139	1.91	1140
High School	1.2	3723	1.09	3717	1.1	3722
Some College Work	1.39	3179	1.33	3173	1.24	3175
Completed College	1.48	2671	1.6	2664	1.66	2667
Graduate Degree	1.64	2927	1.74	2920	1.66	2924
Region						
Northeast	1.5	3002	1.56	2995	1.26	3003
Midwest	1.32	4056	1.17	4053	1.12	4050
South	1.24	4873	1.1	4855	1.28	4866
West	1.49	3011	1.43	3002	1.44	3008

Table E2.4
Standard Errors for Percentages of 1992 High School Seniors Who Report that Close Friends Feel Various Academic Activities are Very Important (Cont'd)

	Important to Attend Classes Regularly		Important to Get Good Grades		Important to Study	
Standard Errors	**SE**	**N**	**SE**	**N**	**SE**	**N**
Tested Proficiency						
Below basic in at least one area	1.64	2239	1.58	2228	1.61	2235
At least basic in all areas	0.84	9816	0.8	9796	0.76	9809
Native Language						
English	0.72	12932	0.69	12905	0.68	12920
Non-English	2.13	1639	2.12	1631	1.9	1637
High School Program						
General	1.02	5374	0.98	5359	0.95	5368
College Preparatory	1.02	7278	1.01	7262	1.01	7272
Vocational	1.71	1574	1.84	1570	1.6	1571
Class Rank						
Highest Quarter	1.47	3530	1.38	3525	1.58	3529
Third Quarter	1.98	3040	1.87	3035	1.67	3037
Second Quarter	2.09	2644	2.07	2638	1.95	2643
Lowest Quarter	1.91	2098	1.78	2091	1.68	2093
Urbanicity of School						
Urban	1.36	4249	1.41	4236	1.41	4243
Suburban	1.09	6039	0.98	6026	0.98	6035
Rural	1.1	4625	0.99	4614	1.01	4620
Type of School						
Public	0.73	12731	0.63	12701	0.66	12718
Catholic	2.65	880	2.87	878	2.99	880
NAIS Private	7.93	991	5.22	989	6.5	989
Other Private	4.97	340	7.5	337	6.09	340

Table E2.4
Standard Errors for Percentages of 1992 High School Seniors Who Report that Close Friends Feel Various Academic Activities are Very Important (Cont'd)

	Important to Attend Classes Regularly		Important to Get Good Grades		Important to Study	
Standard Errors	**SE**	**N**	**SE**	**N**	**SE**	**N**
Percent Receiving Subsidized Lunch						
10% or Less	1.63	6242	1.61	6230	1.5	6238
11% to 49%	1.23	5976	1.17	5962	1.09	5969
50% or More	2.38	1300	2.56	1293	2.16	1298

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table E3.1
Standard Errors for Percentages of 1992 High School Seniors Enrolled in Different High School Programs

	General High School Program	College Preparatory	Technical Education	Unweighted N
Standard Errors				
Total	0.73	0.73	0.44	15245
Gender				
Male	0.91	0.96	0.59	7563
Female	0.91	0.94	0.58	7682
Race/Ethnicity				
Asian/Pacific Islander	2.35	2.41	1.76	1104
Hispanic	2.07	1.83	1.25	1737
Black	2	1.95	1.42	1364
White	0.87	0.89	0.49	10835
Socio-Economic Status				
Low	1.21	1.04	1.05	3540
Middle	0.98	0.99	0.55	7097
High	1.35	1.35	0.31	4426
Parents' Education				
Less than High School	2.03	1.6	1.72	1164
High School	1.23	1.15	0.94	3750
Some College Work	1.33	1.31	0.79	3229
Completed College	1.54	1.59	0.63	2746
Graduate Degree	1.49	1.51	0.43	3004
Region				
Northeast	1.74	1.66	1.22	3022
Midwest	1.34	1.43	0.91	4015
South	1.11	1.15	0.7	5132
West	1.73	1.7	0.74	3052

Table E3.1
Standard Errors for Percentages of 1992 High School Seniors Enrolled in Different High School Programs (Cont'd)

	General High School Program	College Preparatory	Technical Education	Unweighted N
Tested Proficiency				
Below basic in at least one area	1.59	1.59	1.25	2224
At least basic in all areas	0.87	0.89	0.48	9977
Native Language				
English	0.76	0.77	0.46	13097
Non-English	2.12	2.08	1.3	1744
Class Rank				
Highest Quarter	1.15	1.31	0.78	3611
Third Quarter	1.96	2.04	1.03	3080
Second Quarter	1.99	2.28	1.13	2692
Lowest Quarter	1.94	1.92	1.14	2106
Plans for Next Year				
Four-Year College	0.97	0.99	0.4	8061
Two-Year Academic	1.76	1.73	0.84	1679
Two-Year Vocational/Trade	2.1	1.66	1.87	1212
Will not attend school	1.31	1.14	1.18	2868
Uncertain	2.59	2.27	2.21	627
Urbanicity of School				
Urban	1.42	1.55	0.9	4403
Suburban	1.17	1.15	0.64	6157
Rural	1.34	1.25	0.8	4629
Type of School				
Public	0.75	0.74	0.49	12953
Catholic	2.46	2.57	0.7	879
NAIS Private	1.79	1.79	0	1040
Other Private	6.26	6.33	0.8	349

Table E3.1
Standard Errors for Percentages of 1992 High School Seniors Enrolled in Different High School Programs

	General High School Program	College Preparatory	Technical Education	Unweighted N
Percent Receiving Subsidized Lunch				
10% or Less	1.63	1.72	0.61	6368
11% to 49%	1.21	1.3	0.79	6043
50% or More	2.8	2.59	1.58	1370

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table E3.2
Standard Errors for Percentages of 1992 High School Seniors Completing Various Combinations of "New Basics" Courses

	Less Than Minimum	MIN: 4E+3SS+ 2S+2M	MIN +1M+1S	MIN+1M +1S+2FL +.5CS	Unweighted N
Standard Errors					
Total	1.06	0.94	0.97	0.75	14096
Gender					
Male	1.40	1.41	1.40	0.84	7064
Female	1.23	1.08	1.14	0.96	7032
Race/Ethnicity					
Asian/Pacific Islander	2.60	2.73	2.42	2.50	1028
Hispanic	2.80	2.73	1.66	1.49	1618
Black	2.67	2.49	1.87	2.11	1249
White	1.27	1.14	1.22	0.90	10027
Socio-Economic Status					
Low	1.64	1.57	0.99	0.89	3335
Middle	1.39	1.40	1.19	0.96	6607
High	1.69	1.37	2.41	1.43	4020
Parents' Education					
Less than High School	2.74	2.34	2.15	1.46	1094
High School	1.73	1.87	1.08	0.94	3527
Some College Work	1.80	1.91	1.38	1.29	3000
Completed College	1.90	1.37	1.97	1.79	2496
Graduate Degree	2.01	1.94	3.21	1.54	2735
Region					
Northeast	2.21	1.47	2.85	2.58	2681
Midwest	2.28	1.88	1.72	1.02	3852
South	1.69	1.72	1.58	1.24	4683
West	2.08	1.88	1.36	0.98	2880

Table E3.2
Standard Errors for Percentages of 1992 High School Seniors Completing Various Combinations of "New Basics" Courses (Cont'd)

	Less Than Minimum	MIN: 4E+3SS+ 2S+2M	MIN +1M+1S	MIN+1M +1S+2FL +.5CS	Unweighted N
Tested Proficiency					
Below basic in at least one area	2.14	1.79	2.07	0.71	2309
At least basic in all areas	1.17	1.17	1.21	0.89	9678
Native Language					
English	1.13	1.01	1.06	0.80	12146
Non-English	2.54	2.57	1.68	1.80	1609
High School Program					
General	1.53	1.44	0.94	0.66	4964
College Preparatory	1.35	1.37	1.68	1.29	6862
Vocational	2.28	2.06	1.41	1.28	1517
Class Rank					
Highest Quarter	1.56	1.35	1.61	1.52	3676
Third Quarter	1.69	1.66	1.88	1.43	3233
Second Quarter	2.02	2.29	1.58	1.14	2890
Lowest Quarter	2.11	2.07	1.24	0.51	2322
Plans for Next Year					
Four-Year College	1.33	1.27	1.56	1.17	7363
Two-Year Academic	2.36	2.45	2.84	1.40	1521
Two-Year Vocational/Trade	2.64	2.03	1.65	1.04	1150
Will not Attend School	1.86	1.80	1.00	0.80	2688
Uncertain	3.77	4.59	2.17	1.17	632
Urbanicity of School					
Urban	1.90	1.80	1.63	1.44	3964
Suburban	1.64	1.68	1.78	0.99	5643
Rural	1.97	1.31	1.28	1.68	4458

Table E3.2
Standard Errors for Percentages of 1992 High School Seniors Completing Various Combinations of "New Basics" Courses (Cont'd)

	Less Than Minimum	MIN: 4E+3SS+ 2S+2M	MIN +1M+1S	MIN+1M +1S+2FL +.5CS	Unweighted N
Type of School					
Public	1.11	0.99	0.88	0.77	12069
Catholic	3.54	3.15	3.26	3.70	783
NAIS Private	11.25	1.93	15.35	3.14	978
Other Private	7.03	4.25	10.75	5.82	266
Percent Receiving Subsidized Lunch					
10% or Less	1.75	1.55	1.93	1.02	6236
11% to 49%	1.53	1.36	1.01	1.31	6119
50% or More	2.98	2.56	1.83	1.60	1355

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table E3.3
Standard Errors for Percentages of 1992 High School Seniors Who Report Spending Various Amounts of Time per Week Doing Homework Outside of School

	Less Than 1 Hour	1-6 Hours	7 or More Hours	Unweighted N
Standard Errors				
Total	0.45	0.67	0.7	15612
Gender				
Male	0.71	0.9	0.95	7746
Female	0.45	0.88	0.91	7866
Race/Ethnicity				
Asian/Pacific Islander	1.16	2.28	2.47	1129
Hispanic	1.05	2.01	2.07	1832
Black	1.23	2.42	2.16	1381
White	0.55	0.76	0.83	11055
Socio-Economic Status				
Low	0.94	1.13	1.12	3688
Middle	0.64	0.9	0.91	7269
High	0.63	1.42	1.46	4467
Parents' Education				
Less than High School	1.44	1.92	1.81	1215
High School Graduate/GED	1.03	1.16	1.17	3881
Some College Work	0.85	1.22	1.19	3308
Completed College	0.8	1.43	1.4	2752
Graduate Degree	0.64	1.64	1.72	3021
Region				
Northeast	1.15	1.46	1.72	3056
Midwest	0.9	1.22	1.29	4141
South	0.77	1.19	1.23	5241
West	0.76	1.47	1.54	3153

Table E3.3
Standard Errors for Percentages of 1992 High School Seniors Who Report Spending Various Amounts of Time per Week Doing Homework Outside of School (Cont'd)

	Less Than 1 Hour	1-6 Hours	7 or More Hours	Unweighted N
Tested Proficiency				
Below basic in at least one area	1.14	1.67	1.49	2360
At least basic in all areas	0.54	0.75	0.85	10248
Native Language				
English	0.49	0.71	0.74	13381
Non-English	0.96	2.1	2.16	1808
High School Program				
General	0.69	0.96	0.89	5628
College Preparatory	0.49	1.02	1.07	7553
Vocational	1.51	1.69	1.52	1649
Class Rank				
Highest Quarter	0.63	1.48	1.52	3640
Third Quarter	1.69	1.82	1.71	3172
Second Quarter	1.17	2.03	2.12	2795
Lowest Quarter	1.39	1.86	1.81	2201
Plans for Next Year				
Four-Year College	0.43	0.96	0.97	8186
Two-Year Academic	0.96	1.81	1.78	1729
Two-Year Vocational/Trade	1.59	2.06	2	1262
Will not Attend School	1.22	1.31	1.16	2975
Uncertain	2.16	2.47	2.27	685
Urbanicity of School				
Urban	0.66	1.5	1.48	4482
Suburban	0.7	1	1.04	6315
Rural	0.84	0.98	1.15	4762

Table E3.3
Standard Errors for Percentages of 1992 High School Seniors Who Report Spending Various Amounts of Time per Week Doing Homework Outside of School (Cont'd)

	Less Than 1 Hour	1-6 Hours	7 or More Hours	Unweighted N
Type of School				
Public	0.47	0.66	0.69	13306
Catholic	1.43	2.5	2.5	897
NAIS Private	1.12	3.08	3.61	1029
Other Private	2.26	5.78	5.73	359
Percent Receiving Subsidized Lunch				
10% or Less	1.04	1.52	1.61	6485
11% to 49%	0.76	1.18	1.33	6238
50% or More	1.82	2.51	2.38	1421

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table E4.1a
Standard Errors for Percentages of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Reading by Demographic and School Characteristics

	Below Basic	Basic	Intermediate	Advanced	Unweighted N
Standard Errors					
Total	0.43	0.69	0.7	0.69	12396
Gender					
Male	0.71	1.01	0.97	0.81	6148
Female	0.42	0.79	0.96	0.99	6248
Race/Ethnicity					
Asian, Pacific Islander	1.23	2.8	3.04	2.18	863
Hispanic	1.13	2.18	1.83	1.31	1425
Black	1.51	2.28	2.12	1.58	1110
White	0.49	0.71	0.79	0.83	8858
Socioeconomic Status					
Low	0.81	1.24	1.12	0.8	2990
Middle	0.42	0.91	0.93	0.85	5887
High	1.1	1.04	1.62	1.62	3476
Parents' Education					
Less than High School	1.36	2.06	2.01	1.26	988
High School Graduate/GED	0.77	1.22	1.24	0.96	3128
Some College Work	0.56	1.25	1.22	0.97	2659
Completed College	1.4	1.16	1.62	1.64	2241
Graduate Degree	0.74	1.31	1.81	2	2356
Region					
Northeast	0.64	1.38	1.78	1.9	2349
Midwest	0.67	1.22	1.21	1.15	3360
South	0.96	1.24	1.2	1.17	4331
West	0.73	1.69	1.51	1.35	2355

Table E4.1a
Standard Errors for Percentages of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Reading by Demographic and School Characteristics (Cont'd)

	Below Basic	Basic	Intermediate	Advanced	Unweighted N
Native Language					
English	0.46	0.71	0.74	0.72	10753
Non-English	0.94	2.11	1.9	1.56	1428
Urbanicity of School					
Urban	0.8	1.38	1.63	1.65	3500
Suburban	0.79	1.13	1.09	1.04	4818
Rural	0.59	1.04	1.05	0.85	4066
Type of School					
Public	0.45	0.72	0.69	0.65	10610
Catholic	0.64	2.18	2.28	2.84	743
NAIS Private	0.74	2.06	10.3	9.02	774
Other Private	4.81	5.69	6.93	7.19	268
Percent Receiving Subsidized Lunch					
10% or Less	1.07	1.36	1.69	1.59	5346
11% to 49%	0.7	1.07	1.4	1.01	5269
50% or More	1.34	2.91	2.36	1.56	1196
Percent Minority Enrollment					
50% or More	.38	.79	1.01	.95	9757
Less than 50%	1.58	2.44	2.07	1.94	2142

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table E4.1b
Standard Errors for Percentages of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Math by Demographic and School Characteristics

	Below Level 1	Level 1	Level 2	Level 3	Level 4 or 5	Unweighted N
Standard Errors						
Total	0.3	0.65	0.51	0.6	0.83	11553
Gender						
Male	0.43	0.91	0.82	0.88	1.13	5780
Female	0.38	0.77	0.62	0.84	1.04	5773
Race/Ethnicity						
Asian/Pacific Islander	1.45	1.7	2.09	2.57	3.38	833
Hispanic	1.11	1.74	1.24	1.51	1.58	1308
Black	1.4	2.65	1.61	1.82	1.54	1033
White	0.29	0.63	0.61	0.7	0.94	8247
Socioeconomic Status						
Low	0.76	1.21	0.91	1.04	0.82	2761
Middle	0.41	0.93	0.73	0.81	0.96	5433
High	0.29	0.63	1.16	1.37	1.62	3314
Parents' Education						
Less than High School	1.1	2.15	1.68	1.59	1.28	921
High School Graduate/GED	0.73	1.09	1.13	1.07	1.06	2847
Some College Work	0.54	1.33	0.9	1.16	1.26	2456
Completed College	0.55	0.91	1.62	1.42	1.6	2105
Graduate Degree	0.28	0.77	0.79	1.64	1.86	2255
Region						
Northeast	0.63	1.19	0.86	1.53	2.11	2006
Midwest	0.58	0.9	0.96	1.09	1.37	3115
South	0.46	1.32	1.05	1.01	1.33	4039
West	0.87	1.42	0.9	1.33	1.93	2192

Table E4.1b
Standard Errors for Percentages of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Math by Demographic and School Characteristics (Cont'd)

	Below Level 1	Level 1	Level 2	Level 3	Level 4 or 5	Unweighted N
Native Language						
English	0.32	0.68	0.56	0.65	0.86	1007
Non-English	1.05	1.76	1.2	1.67	1.96	1345
Urbanicity of School						
Urban	0.68	1.2	0.94	1.43	1.78	3285
Suburban	0.47	1.18	1	0.84	1.32	4499
Rural	0.47	0.97	0.66	0.94	1.06	3756
Type of School						
Public	0.32	0.69	0.55	0.59	0.79	9842
Catholic	0.63	1.59	1.78	2.67	3.53	700
NAIS Private	0.94	0.63	1.1	2.81	3.92	761
Other Private	2.4	3.64	2.96	6.36	7.9	249
Percent Receiving Subsidized Lunch						
10% or Less	0.47	1.51	1.14	1.52	1.98	5007
11% to 49%	0.45	1.16	1.42	1.09	1.16	4912
50% or More	1.21	2.38	1.35	1.71	2.19	1106
Percent Minority Enrollment						
50% or More	.33	.9	.57	.87	1.2	9115
Less than 50%	.88	2.3	1.38	2.22	2.1	1985

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table E4.1c
Standard Errors for Percentages of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Science by Demographic and School Characteristics

	Below Basic	Basic	Intermediate	Advanced	Unweighted N
Standard Errors					
Total	0.63	0.59	0.69	0.67	11623
Gender					
Male	0.93	0.84	1	0.92	5834
Female	0.72	0.82	0.87	0.86	5789
Race/Ethnicity					
Asian/Pacific Islander	2.09	2.61	2.58	2.44	808
Hispanic	1.7	2.05	1.63	1.31	1324
Black	2.69	2.21	1.96	0.79	1053
White	0.59	0.66	0.83	0.79	8299
Socio-Economic Status					
Low	1.17	1.23	1.07	0.67	2794
Middle	0.8	0.85	0.95	0.82	5512
High	1.2	0.88	1.53	1.63	3270
Parents' Education					
Less than High School	2.08	2.08	1.77	0.98	933
High School Graduate/GED	1	1.23	1.17	0.95	2918
Some College Work	1.09	1.2	1.38	1.14	2464
Completed College	1.54	1.33	1.69	1.59	2117
Graduate Degree	0.85	1.22	1.92	2.04	2223
Region					
Northeast	1.11	1.29	1.9	1.59	2171
Midwest	0.9	1.06	1.17	1.09	3168
South	1.37	1.06	1.11	1.22	4052
West	1.13	1.46	1.46	1.51	2231

Table E4.1c
Standard Errors for Percentages of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Science by Demographic and School Characteristics (Cont'd)

	Below Basic	Basic	Intermediate	Advanced	Unweighted N
Native Language					
English	0.66	0.63	0.76	0.7	10088
Non-English	1.74	2.07	1.89	1.82	1329
High School Program					
General	0.93	1.01	1.03	0.86	3978
College Preparatory	0.74	0.76	1.08	1.08	5738
Vocational	1.57	1.76	1.64	0.8	1286
New Basics Courses Taken					
Less Than Minimum	1.32	1.27	1.19	1.02	3979
Minimum: 4E+3SS+2S+2M	1.68	2.06	2.29	1.62	2294
Minimum +1M+1S	2.01	1.27	2.53	1.78	2567
Minimum +1M +1S+2FL+.5CS	0.83	1.58	1.99	1.87	1974
Homework-Hours per Week					
Less than 1 Hour	1.26	1.64	1.39	1.29	1602
1-6 Hours	1.07	0.86	0.95	0.8	5073
7 or More Hours	0.73	0.91	1.12	1.13	4695
Class Rank					
Highest Quartile	1.07	0.98	1.4	1.77	2868
Third Quartile	1.4	1.62	1.92	1.28	2557
Second Quartile	2.24	1.95	2.62	1.03	2224
Lowest Quartile	1.69	1.97	2.42	0.78	1758

Table E4.1c
Standard Errors for Percentages of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Science by Demographic and School Characteristics (Cont'd)

	Below Basic	Basic	Intermediate	Advanced	Unweighted N
Plans for Next Year					
Four-Year College	0.69	0.74	1.03	1.01	6199
Two-Year Academic	1.48	1.8	1.91	1.12	1234
Two-Year Vocational/ Trade	2.26	2.12	1.54	1.78	946
Will not Attend School	1.24	1.4	1.23	1.26	2211
Uncertain	2.38	2.78	2.35	1.7	523
Urbanicity of School					
Urban	1.25	1.25	1.47	1.45	3246
Suburban	1.18	0.96	1.1	1.05	4518
Rural	0.78	0.94	1.04	0.96	3846
Type of School					
Public	0.67	0.62	0.69	0.65	9962
Catholic	1.51	2.42	2.41	3.49	671
NAIS Private	0.98	2.73	11.38	9.47	732
Other Private	4.48	6.74	7.69	5.76	257
Percent Receiving Subsidized Lunch					
10% or less	1.35	1.17	1.77	1.38	4997
11% to 49%	1.08	1.13	1.48	0.97	4960
50% or more	2.44	2.28	2.23	1.22	1128

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table E4.2a
Standard Errors for Percentages of 1992 High School Seniors Proficiency in Reading, by Race, Controlling for SES

	Below Basic	Basic	Inter-mediate	Advanced	N
LOW SOCIOECONOMIC STATUS					
Asian	3.46	5.71	5.97	4.71	183
Hispanic	1.46	2.91	2.48	1.41	731
Black	2.57	2.72	2.61	2.52	483
White	.95	1.59	1.50	.97	1546
MIDDLE SOCIOECONOMIC STATUS					
Asian	1.97	5.2	4.85	3.32	358
Hispanic	1.50	3.03	2.77	2.42	532
Black	1.57	4.03	3.49	1.61	484
White	.43	.88	.99	.98	4441
HIGH SOCIOECONOMIC STATUS					
Asian	.86	3.34	3.75	4.17	319
Hispanic	3.16	6.07	5.03	4.72	145
Black	3.08	5.68	5.18	5.87	140
White	1.28	1.10	1.77	1.78	2860

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table E4.2b
Standard Errors for Percentages of 1992 High School Seniors Overall Math Proficiency by Race, Controlling for SES

	Below Level 1	Level 1	Level 2	Level 3	Levels 4 or 5	N
LOW SOCIOECONOMIC STATUS						
Asian	2.33	5.12	6.4	5.39	3.95	178
Hispanic	1.74	2.44	1.82	2.12	2.01	670
Black	2.49	3.15	2.05	2.55	1.18	458
White	.76	1.66	1.24	1.43	1.21	1414
MIDDLE SOCIOECONOMIC STATUS						
Asian	3.01	2.39	3.11	3.37	5.98	337
Hispanic	1.36	2.93	1.93	2.48	2.79	485
Black	1.7	4.84	2.81	2.68	2.69	442
White	.43	.82	.82	.94	1.07	4101
HIGH SOCIOECONOMIC STATUS						
Asian	.71	1.44	2.6	3.11	3.63	315
Hispanic	1.98	3.48	3.06	5.54	5.75	136
Black	2.7	4.52	4.9	5.86	4.65	131
White	.28	.68	1.33	1.41	1.73	2720

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table E4.2c
Standard Errors for Percentages of 1992 Seniors Proficiency in Science by Race, Controlling for SES

	Below Basic	Basic	Inter-mediate	Advanced	Unweighted N
LOW SOCIOECONOMIC STATUS					
Asian	6.31	4.60	4.70	2.94	170
Hispanic	2.60	2.61	2.37	1.29	679
Black	3.16	3.13	2.18	0.58	459
White	1.34	1.61	1.44	1.03	1440
MIDDLE SOCIOECONOMIC STATUS					
Asian	2.87	4.49	4.43	4.17	333
Hispanic	2.59	3.11	2.68	2.61	491
Black	4.61	3.71	2.78	1.24	460
White	0.62	0.90	1.08	0.95	4158
HIGH SOCIOECONOMIC STATUS					
Asian	1.58	3.36	2.99	4.42	301
Hispanic	3.55	5.41	6.04	4.88	136
Black	3.33	4.25	6.18	4.48	131
White	1.39	0.99	1.75	1.75	2691

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table E4.3
Standard Errors for Percentages of 1992 High School Seniors Demonstrating Advanced Proficiency by School Composition Controlling for Social Class

	Standard Errors for Percents Demonstrating Advanced Reading Proficiency					
	0-10 percent Students receive free lunch		11-49 percent Students receive free lunch		50 percent or more students receive free lunch	
Socioeconomic Status						
	SE	N	SE	N	SE	N
Low	1.71	605	1.62	1601	1.73	625
Middle	2.45	2446	1.29	2698	2.58	458
High	2.7	2277	2.31	955	9.46	108
	Standard Errors for Percents Demonstrating Advanced Math Proficiency					
Socioeconomic Status						
	SE	N	SE	N	SE	N
Low	2.05	555	1.39	1487	3.28	579
Middle	2.52	2257	1.69	2492	3.31	426
High	3.16	2177	2.35	916	10.6	97
	Standard Errors for Percents Demonstrating Advanced Science Proficiency					
Socioeconomic Status						
	SE	N	SE	N	SE	N
Low	1.51	563	.95	1505	1.29	582
Middle	1.64	2277	1.41	2524	2.25	445
High	3.04	2139	2.24	914	6.13	95

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table E4.4a
Standard Errors for Percentages of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Reading by Student Enrollment and Effort

	Below Basic	Basic	Intermediate	Advanced	Unweighted N
Standard Errors					
Total	0.43	0.69	0.7	0.69	12396
High School Program					
General High School Program	0.64	1.06	1.07	0.82	4244
College Preparatory	0.62	0.86	1.02	1.11	6131
Vocational	1.27	1.7	1.71	0.98	1357
New Basics Courses Taken					
Less than Minimum	0.89	1.31	1.27	1.02	4229
Minimum: 4E+3SS+2S+2M	0.68	2.1	2.59	1.74	2434
Minimum + 1M+1S	1.81	1.87	2.38	2.19	2743
Minimum + 1M+1S+2FL+.5CS	0.33	1.1	1.63	1.8	2119
Homework Hours per Week					
Less than 1 hour	0.97	1.54	1.46	0.85	1702
1-6 hours	0.74	1.02	0.98	0.85	5397
7 or more hours	0.46	0.87	1.15	1.23	5027
Class Rank					
Highest Quartile	0.32	1.06	1.46	1.63	3104
Third Quartile	1.1	1.6	2.02	2.08	2713
Second Quartile	1.83	2.07	2.32	1.11	2380
Lowest Quartile	1.12	1.93	2.26	1.53	1855

Table E4.4a
Standard Errors for Percentages of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Reading by Student Enrollment and Effort (Cont'd)

	Below Basic	Basic	Intermediate	Advanced	Unweighted N
Plans For Next Year					
Four-Year College	0.55	0.7	0.97	1	6617
Two-Year Academic	1.06	1.87	1.76	1.45	1318
Two-Year Vocational/Trade	1.2	2.19	1.86	1.71	1010
Will not Attend School	1.04	1.39	1.36	1.16	2337
Uncertain	1.39	2.7	2.73	1.4	564

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table E4.4b
Standard Errors for Percentages of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Mathematics by Student Enrollment and Effort

	Below Level 1	Level 1	Level 2	Level 3	Level 4 or 5	Unweighted N
Standard Errors						
Total	0.3	0.65	0.51	0.6	0.83	11553
High School Program						
General High School Program	0.6	1.13	0.86	0.96	1.07	3861
College Preparatory	0.22	0.55	0.8	0.92	1.16	5821
Vocational	1.09	1.81	1.26	1.53	1.12	1252
New Basics Courses Taken						
Less than Minimum	0.67	1.34	0.9	1.17	1.32	3938
Minimum: 4E+3SS+2S+2M	0.63	2.6	2.55	1.89	1.98	2212
Minimum + 1M+1S	0.39	1.17	1.85	2.26	2.78	2595
Minimum + 1M+1S+2FL+.5CS	0.22	0.66	0.97	1.54	1.73	2009
Homework Hours per Week						
Less than 1 Hour	0.83	1.66	1.19	1.48	1.38	1546
1-6 Hours	0.4	0.99	0.8	0.88	1.02	5012
7 or more Hours	0.37	0.72	0.83	0.93	1.28	4741
Class Rank						
Highest Quarter	0.29	0.82	0.71	1.34	1.6	2989
Third Quarter	0.44	2.04	1.27	1.84	2.33	2506
Second Quarter	0.67	1.75	2.98	1.88	1.62	2155
Lowest Quarter	1.04	2.19	1.7	2.16	1.18	1714

Table E4.4b
Standard Errors for Percentages of 1992 High School Seniors Demonstrating Proficiency at Various Levels of Mathematics by Student Enrollment and Effort (Cont'd)

	Below Level 1	Level 1	Level 2	Level 3	Level 4 or 5	Unweighted N
Plans for Next Year						
Four-Year College	0.2	0.49	0.79	0.84	1.05	6276
Two-Year Academic	0.95	1.84	1.24	1.97	1.55	1203
Two-Year Vocational/Trade	1.47	2.37	2	1.89	1.29	924
Will not Attend School	0.8	1.45	1.07	1.26	1.3	2138
Uncertain	1.86	2.66	1.76	2.71	2.32	506

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table E4.4c
Standard Errors for Percentages of 1992 High School Seniors Demonstrating Proficiency of Various Levels of Science by Student Enrollment and Effort

	Below Basic	Basic	Intermediate	Advanced	Unweighted N
Standard Errors					
Total	0.63	0.59	0.69	0.67	11623
High School Program					
General High School Program	0.93	1.01	1.03	0.86	3978
College Preparatory	0.74	0.76	1.08	1.08	5738
Vocational	1.57	1.76	1.64	0.8	1286
New Basics Courses Taken					
Less than Minimum	1.32	1.27	1.19	1.02	3979
Minimum: 4E+3SS+2S+2M	1.68	2.06	2.29	1.62	2294
Minimum + 1M+1S	2.01	1.27	2.53	1.78	2567
Minimum + 1M+1S+2FL+.5CS	0.83	1.58	1.99	1.87	1974
Homework Hours per Week					
Less than 1 Hour	1.26	1.64	1.39	1.29	1602
1-6 Hours	1.07	0.86	0.95	0.8	5073
7 or More Hours	0.73	0.91	1.12	1.13	4695
Class Rank					
Highest Quarter	1.07	0.98	1.4	1.77	2868
Third Quarter	1.4	1.62	1.92	1.28	2557
Second Quarter	2.24	1.95	2.62	1.03	2224
Lowest Quarter	1.69	1.97	2.42	0.78	1758

Table E4.4c
Standard Errors for Percentages of 1992 High School Seniors Demonstrating Proficiency of Various Levels of Science by Student Enrollment and Effort (Cont'd)

	Below Basic	Basic	Intermediate	Advanced	Unweighted N
Plans for Next Year					
Four Year College	0.69	0.74	1.03	1.01	6199
Two-Year Academic	1.48	1.8	1.91	1.12	1234
Two-Year Vocational/Trade	2.26	2.12	1.54	1.78	946
Will not Attend School	1.24	1.4	1.23	1.26	2211
Uncertain	2.38	2.78	2.35	1.7	523

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table E5.1
Percent of 1992 High School Seniors Who Plan to Continue Education Immediately After High School

	Will Continue Education Immediately After High School	Will Not Continue Education Immediately After High School	Uncertain	‑ N
TOTAL	0.58	0.55	0.23	15696
GENDER				
Male	0.84	0.82	0.35	7762
Female	0.67	0.62	0.30	7934
RACE/ETHNICITY				
Asian	2.37	2.10	1.09	1139
Hispanic	1.57	1.41	1.01	1802
Black	1.90	1.71	0.67	1432
White	0.69	0.64	0.25	11108
SOCIOECONOMIC STATUS				
Low	1.17	1.15	0.82	3725
Middle	0.76	0.70	0.80	7325
High	0.65	0.31	0.20	4461
PARENTS' EDUCATION				
Less Than H.S.	1.81	1.84	0.82	1222
High School Graduate/GED	1.11	1.09	0.54	3897
Some College Work	1.70	1.01	0.44	3326
Completed College	0.97	0.95	0.26	2778
Graduate Degree	1.15	1.10	0.43	3030
TESTED PROFICIENCY				
Below basic in at least one area	1.44	1.33	0.71	2416
At least basic in all areas	0.70	0.66	0.28	10209
NATIVE LANGUAGE				
English	0.63	0.59	0.24	13482
Non-English	1.47	1.27	1.00	1792
HIGH SCHOOL PROGRAM				
General	0.96	0.92	0.40	5644
College Preparatory	0.60	0.55	0.24	7562
Vocational	1.77	1.80	0.87	1681

Table E5.1
Percent of 1992 High School Seniors Who Plan to Continue Education Immediately After High School (Cont'd)

	Will Continue Education Immediately After High School	Will Not Continue Education Immediately After High School	Uncertain	N
NEW BASICS COURSES TAKEN				
Less than Minimum	1.31	1.24	0.50	4875
Minimum:4E+3SS+2S+2M	2.16	1.95	1.48	2706
Minimum+1M+1S	0.97	0.77	0.52	3137
Minimum +1M+1S+2FL+.5CS	0.90	0.85	0.36	2373
CLASS RANK				
Highest Quarter	0.68	0.59	0.32	3549
Third Quarter	1.89	1.89	0.50	3036
Second Quarter	1.60	1.42	0.90	2652
Lowest Quarter	2.04	1.85	1.67	2030
URBANICITY				
Urban	1.08	0.98	0.45	4503
Suburban	0.98	0.90	0.35	6325
Rural	0.99	0.96	0.42	4811
TYPE OF SCHOOL				
Public	0.62	0.58	0.25	13391
Catholic	1.25	1.05	0.71	897
NAIS private	2.09	1.53	0.73	1031
Other private	4.80	4.77	0.86	352
PERCENT RECEIVING SUBSIDIZED LUNCH				
10% or less	1.34	1.20	0.62	6289
11% - 49%	1.02	0.95	0.48	5927
50% or more	2.16	1.91	1.82	1289

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table E5.2
Standard Errors for Percentages of 1992 College Bound High School Seniors Who Plan to Attend Various Types of Postsecondary Institutions

	Four Year College	Two Year Academic	Two-Year Technical	Trade/ Vocational School	Unweighted N
Standard Errors					
Total	0.76	0.53	0.43	0.4	14692
Gender					
Male	1	0.65	0.62	0.63	7126
Female	0.94	0.74	0.54	0.42	7566
Race/Ethnicity					
Asian/Pacific Islander	2.23	1.77	1.25	1.2	1078
Hispanic	1.77	1.77	1.2	0.98	1694
Black	2.44	1.72	1.55	1.99	1319
White	0.86	0.59	0.51	0.41	10403
Socioeconomic Status					
Low	1.27	1.16	0.88	0.89	3368
Middle	0.98	0.70	0.64	0.58	6892
High	1.03	0.84	0.41	0.34	4269
Parents' Education					
Less than High School	2.07	1.78	1.6	1.33	1098
High School Graduate/GED	1.23	1.1	0.85	0.8	3559
Some College Work	1.34	0.99	1.09	0.58	3151
Completed College	1.16	0.9	0.67	0.54	2668
Graduate Degree	1.26	1.1	0.47	0.28	2889
Region					
Northeast	1.5	1.15	0.71	0.75	2913
Midwest	1.37	0.82	0.81	0.73	3877
South	1.39	0.93	0.91	0.85	4891
West	1.75	1.38	0.85	0.69	2988

Table E5.2
Standard Errors for Percentages of 1992 College Bound High School Seniors Who Plan to Attend Various Types of Postsecondary Institutions (Cont'd)

	Four Year College	Two Year Academic	Two-Year Technical	Trade/ Vocational School	Unweighted N
Tested Proficiency					
Below basic in at least one area	1.74	1.28	1.31	1.59	2144
At least basic in all areas	0.83	0.6	0.49	0.38	9768
Native Language					
English	0.8	0.56	0.46	0.44	12620
Non-English	1.95	1.69	1.2	0.99	1686
High School Program					
General	1.17	0.93	0.82	0.62	5195
College Preparatory	0.76	0.64	0.32	0.29	7301
Vocational	1.84	1.14	1.6	1.42	1515
New Basics Courses Taken					
Less than Minimum	1.37	1.01	1.03	0.92	4704
Minimum: 4E+3SS+2S+2M	2.37	1.89	1.99	1.28	2665
Minimum +1M+1S	1.94	1.78	0.5	0.67	3134
Minimum + 1M+1S+2FL+.5CS	1.33	1.03	0.46	0.83	2372
Class Rank					
Highest Quarter	1.29	0.84	0.83	0.53	3511
Third Quarter	2.01	1.19	1.81	1.14	3016
Second Quarter	2.09	1.39	1.22	1.43	2614
Lowest Quarter	1.88	2.19	1.71	1.1	1972
Urbanicity of School					
Urban	1.44	1.17	0.66	0.6	4269
Suburban	1.24	0.83	0.78	0.67	5944
Rural	1.16	0.85	0.71	0.71	4428

Table E5.2
Standard Errors for Percentages of 1992 College Bound High School Seniors Who Plan to Attend Various Types of Postsecondary Institutions (Cont'd)

	Four Year College	Two Year Academic	Two-Year Technical	Trade/ Vocational School	Unweighted N
Type of School					
Public	0.79	0.54	0.48	0.44	12474
Catholic	2.71	2.53	0.65	0.4	870
NAIS Private	2.24	0.55	0.48	2.11	988
Other Private	5.66	5.33	1.69	1.02	337
Percent Receiving Subsidized Lunch					
10% or Less	1.69	1.32	1.1	0.61	6149
11% To 49%	1.28	0.89	0.8	0.82	5851
50% or More	2.37	1.62	2.34	1.66	1298

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table E5.3
Standard Errors for Percentages of 1992 High School Seniors Who Are Taking Steps to Continue Education

	Took College Placement Exam		Applied to College	
	SE	Unweighted N	SE	Unweighted N
Standard Errors				
Total	0.78	15272	0.72	15938
Gender				
Male	1	7576	0.97	7937
Female	0.94	7696	0.83	8001
Race/Ethnicity				
Asian/Pacific Islander	2.26	1117	2.09	1157
Hispanic	1.81	1771	1.76	1876
Black	2.56	1369	2.41	1478
White	0.82	10805	0.82	11205
Socioeconomic Status				
Low	1.14	3625	1.13	3835
Middle	0.98	7134	0.95	7421
High	0.91	4331	0.97	4489
Parents' Education				
Less than High School	1.83	1197	1.89	1264
High School Graduate/GED	1.18	3803	1.14	3968
Some College Work	1.38	3240	1.37	3372
Completed College	1.3	2702	1.09	2805
Graduate Degree	0.9	2901	1.11	3042
Region				
Northeast	1.53	2959	1.27	3103
Midwest	1.17	4070	1.2	4204
South	1.45	5110	1.35	5373
West	1.74	3110	1.62	3233

Table E5.3
Standard Errors for Percentages of 1992 High School Seniors Who Are Taking Steps to Continue Education (Cont'd)

	Took College Placement Exam		Applied to College	
	SE	Unweighted N	SE	Unweighted N
Tested Proficiency				
Below basic in at least one area	1.67	2369	1.62	2502
At least basic in all areas	0.79	10014	0.79	10337
Native Language				
English	0.79	13096	0.77	13640
Non-English	2.01	1775	2.03	1860
High School Program				
General	1.13	5503	1.09	5752
College Preparatory	0.77	7337	0.73	7617
Vocational	1.63	1647	1.7	1731
New Basics Courses Taken				
Less than Minimum	1.43	5079	1.39	5293
Minimum: 4E+3SS+2S+2M	2.38	2799	2.21	2913
Minimum +1M+1S	1.38	3132	1.84	3285
Minimum +1M+1S+2FL+.5CS	1.16	2375	1.12	2468
Class Rank				
Highest Quarter	1.07	3544	1.15	3659
Third Quarter	1.98	3085	2.04	3212
Second Quarter	2.18	2720	1.95	2861
Lowest Quarter	1.65	2196	1.81	2293

Table E5.3
Standard Errors for Percentages of 1992 High School Seniors Who Are Taking Steps to Continue Education (Cont'd)

	Took College Placement Exam		Applied to College	
	SE	Unweighted N	SE	Unweighted N
Plans for Next Year				
Four-Year College	0.71	7944	0.57	8262
Two-Year Academic	1.73	1702	1.78	1775
Two-Year Vocational/Trade	1.95	1251	2.02	1307
Will not attend school	1.25	2952	1.09	3110
Uncertain	2.07	685	2.02	709
Urbanicity of School				
Urban	1.48	4373	1.3	4586
Suburban	1.27	6177	1.25	6426
Rural	1.15	4670	1.16	4872
Type of School				
Public	0.8	13039	0.76	13610
Catholic	2.77	877	2.12	905
NAIS Private	0.9	989	0.98	1039
Other Private	4.62	344	4.48	359
Percent Receiving Subsidized Lunch				
10% or less	1.58	6326	1.7	6557
11% to 49%	1.25	6104	1.2	6392
50% or More	2.13	1403	2.25	1474

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table E6.1
Standard Errors for Educational Expectations of 1992 High School Seniors and Their Parents

Respondent's report of how far in school	High School or Less		Some College or Trade		College Degree		Graduate Degree		Don't Know	
	SE	N	SE	N	SE	N	SE	N	SE	N
Father wants respondent to go	.28	622	.52	1975	.65	5314	.72	4566	.37	1219
Mother wants respondent to go	.27	599	.52	2193	.62	5721	.67	4993	.32	1017
Respondent thinks he/she will get	.25	731	.58	3512	.61	5180	.67	5290	.32	823

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table E6.2
Standard Errors for Percentages of 1992 High School Seniors Most Likely to Study Various Academic Fields

	SE	Unweighted N
Agriculture	.13	189
Architecture	.13	253
Art	.18	472
Biological Sciences	.18	439
Business	.40	2173
Communications	.22	441
Computer & Info Science	.21	324
Education	.28	1016
Engineering	.31	1105
English	.17	278
Ethnic Studies	.16	15
Foreign Languages	.07	94
Health Occupations	.36	1047
Home Economics	.09	94
Interdisciplinary Studies	.05	33
Mathematics	.09	94
Music	.14	210
Philosophy	.07	46
Physical Science	.11	253
Pre Professional	.39	1187
Psychology	.28	622
Social Sciences	.24	636
Other	.30	1106
Do Not Plan to Attend College	.64	3180

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table E6.3
Standard Errors for Percentages of 1992 High School Seniors Most Likely to Pursue Various Types of Non-academic Training

	SE	Unweighted N
Agriculture	.05	56
Auto Mechanics	.22	246
Aviation	.08	62
Accounting	.08	102
Business Management	.10	138
Secretarial & Related	.10	178
Other Business & Office	.13	53
Commercial Arts	.09	107
Computer Programming/DP	.11	153
Construction Trades	.08	101
Cosmetology/Hair Styling	.12	175
Drafting	.09	82
Electronics	.11	181
Food Service	.12	41
Health Care	.13	281
Home Economics	.06	43
Hotel & Restaurant Management	.07	27
Marketing & Distribution	.06	34
Metal Working	.08	73
Protective Services	.07	93
Refrigeration, Heating & A.C.	.09	45
Transportation & Material Moving	.06	21
Other	.20	389
Do Not Plan Vocational Training	.55	12780

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table E6.4
Standard Errors for Percentages of 1992 High School Seniors Expecting to Have Various Occupations at 30

	SE	Unweighted N
Office Worker	.18	475
Tradesperson	.15	364
Farmer	.10	131
Full-Time Homemaker	.11	153
Laborer	.08	98
Manager	.27	805
Military	.27	369
Machine Operator	.13	132
Elementary/Secondary School Teacher	.30	1134
Professional I*	.57	4139
Professional II **	.54	3061
Small Business Owner	.29	905
Protective Services	.20	553
Sales	.18	257
Service Worker	.16	324
Technical	.26	798
Not Planning to Work	.05	37
Other	.39	1511
Will Be in School	.14	29

* Professional I = Accountant, Registered Nurse, Engineer, Banker, Librarian, Writer, Social Worker, Actor, Athlete, Artist, Politician, but not Including School Teacher.

** Professional II = Minister, Dentist, Doctor, Lawyer, Scientist, College Teacher.

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table E6.5
Standard Errors for Percentages of 1992 High School Seniors Indicating Level of Education Necessary for the Job they Expect to have at age 30

High School or Less		Some College or Trade		College Degree		Graduate Degree		Not Planning to Work	
SE	**N**	**SE**	**N**	**SE**	**N**	**SE**	**N**	**SE**	**N**
.34	759	.61	3555	.63	5775	.70	5041	.08	68

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table E7.1
Standard Errors for Percentages of 1992 High School Seniors Employed During the School Year

	Not Working	20 Hours/ Week or Less	More than 20 Hours/ Week	Unweighted N
Standard Errors				
Total	0.72	0.64	0.46	15259
Gender				
Male	0.95	0.84	0.63	7510
Female	0.94	0.91	0.58	7749
Race/Ethnicity				
Asian/Pacific Islander	2.55	2.16	1.76	1107
Hispanic	1.83	1.4	1.27	1777
Black	1.95	1.73	1.19	1385
White	0.8	0.74	0.54	10784
Socioeconomic Status				
Low	1.24	1.01	1.31	5421
Middle	0.96	0.90	1.21	7332
High	0.91	0.64	0.79	2323
Parents' Education				
Less than High School	1.94	1.66	1.51	1180
High School Graduate/GED	1.23	1.07	0.89	3805
Some College Work	1.25	1.14	0.91	3216
Completed College	1.51	1.4	0.91	2698
Graduate Degree	1.63	1.61	0.82	2949
Region				
Northeast	1.73	1.59	0.9	3029
Midwest	1.24	1.29	0.91	4046
South	1.27	1.05	0.84	5083
West	1.51	1.28	0.97	3077

Table E7.1
Standard Errors for Percentages of 1992 High School Seniors Employed During the School Year (Cont'd)

	Not Working	20 Hours/ Week or Less	More than 20 Hours/ Week	Unweighted N
Tested Proficiency				
Below basic in at least one area	1.62	1.23	1.22	2359
At least basic in all areas	0.88	0.82	0.46	9977
Native Language				
English	0.76	0.72	0.48	13081
Non-English	1.96	1.48	1.23	1766
High School Program				
General	1	0.86	0.76	5475
College Preparation	1.03	1	0.52	7360
Vocational	1.8	1.59	1.45	1624
New Basics Courses Taken				
Less Than Minimum	1.36	1.22	1.02	5029
Minimum:4E+3SS+2S+2M	2.3	2.31	1.42	2786
Minimum +1M+1S	2.26	2.12	1.11	3168
Minimum+1M+1S+2FL+.5CS	1.65	1.54	0.93	2397
Class Rank				
Highest Quartile	1.53	1.54	0.8	3558
Third Quartile	1.98	1.96	1.19	3090
Second Quartile	2.16	2.11	1.17	2711
Lowest Quartile	2	1.65	1.71	2168
Plans For Next Year				
Four-Year College	0.95	0.93	0.55	7996
Two-Year Academic	1.77	1.58	1.38	1696
Two-Year Vocational/Trade	2.18	1.61	1.63	1255
Will not attend school	1.31	1.11	1.03	2957
Uncertain	2.52	2.31	1.84	682

Table E7.1
Standard Errors for Percentages of 1992 High School Seniors Employed During the School Year (Cont'd)

	Not Working	20 Hours/ Week or Less	More than 20 Hours/ Week	Unweighted N
Urbanicity of School				
Urban	1.45	1.38	0.87	4362
Suburban	1.12	1.02	0.71	6170
Rural	1.16	0.95	0.84	4674
Type of School				
Public	0.74	0.65	0.5	13030
Catholic	2.76	2.84	1.39	862
NAIS Private	4.01	3.13	2.51	995
Other Private	5.01	4.76	2.3	348
Percent Receiving Subsidized Lunch				
10% or less	1.58	1.49	0.92	6326
11% to 49%	1.28	1.23	0.78	6104
50% or more	2.59	1.85	2	1397

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table E7.2
Standard Errors for Percentages of 1992 High School Seniors Participating in Student Government or Volunteer Work

	Student Government During the Current School Year		Community Volunteer Work During Past Two Years	
	SE	Unweighted N	SE	Unweighted N
Standard Errors				
Total	0.53	14404	0.69	15791
Gender				
Male	0.67	7162	0.96	7830
Female	0.7	7242	0.92	7961
Race/Ethnicity				
Asian/Pacific Islander	1.62	1070	2.24	1145
Hispanic	1.7	1709	1.67	1836
Black	2.12	1337	2.35	1454
White	0.57	10092	0.79	11137
Socioeconomic Status				
Low	0.78	405	1.02	1163
Middle	0.79	1039	0.87	3172
High	0.96	879	1.26	2753
Parents' Education				
Less than High School	1.17	1126	1.8	1244
High School Graduate/GED	0.91	3560	1.09	3926
Some College Work	0.97	3050	1.16	3359
Completed College	1.13	2591	1.45	2777
Graduate Degree	1.27	2799	1.59	3025

Table E7.2
Standard Errors for Percentages of 1992 High School Seniors Participating in Student Government or Volunteer Work (Cont'd)

	Student Government During the Current School Year		Community Volunteer Work During Past Two Years	
	SE	Unweighted N	SE	Unweighted N
Region				
Northeast	0.97	2828	1.62	3083
Midwest	0.94	3797	1.27	4175
South	0.99	4767	1.27	4175
West	1.31	2998	1.47	3214
Tested Proficiency				
Below basic in at least one area	0.93	2341	1.3	2472
At least basic in all areas	0.58	9878	0.82	10301
Native Language				
English	0.58	12369	0.73	13541
Non-English	1.69	1708	1.82	1825
High School Program				
General	0.64	5084	0.96	5688
College Preparatory	0.87	7013	0.98	7574
Vocational	0.88	1551	1.37	1704
New Basics Courses Taken				
Less than Minimum	0.81	4819	1.27	5244
Minimum:4E+3SS+2S+2M	2.13	2703	2.25	2893
Minimum +1M+1S	1.53	3071	2.32	3264
Minimum +1M+1S+2FL+.5CS	1.38	2312	1.45	2448

Table E7.2
Standard Errors for Percentages of 1992 High School Seniors Participating in Student Government or Volunteer Work (Cont'd)

	Student Government During the Current School Year		**Community Volunteer Work During Past Two Years**	
	SE	**Unweighted N**	**SE**	**Unweighted N**
Class Rank				
Highest Quarter	1.37	3454	1.49	3649
Third Quarter	1.04	2975	1.91	3192
Second Quarter	2.26	2661	2.09	2838
Lowest Quarter	0.92	2068	1.81	2259
Academic Plans for Next Year				
Four-Year College	0.81	7630	0.92	8255
Two-Year Academic	1.31	1587	1.64	1773
Two-Year Vocational/Trade	1.06	1172	1.92	1303
Will not attend school	0.84	2747	1.21	3107
Uncertain	1.57	662	2.11	714
Urbanicity of School				
Urban	1.23	4199	1.52	4525
Suburban	0.75	5798	1.11	6362
Rural	0.86	4365	1.04	4851
Type of School				
Public	0.56	12332	0.71	13491
Catholic	1.71	846	2.81	898
NAIS Private	3.86	924	4.45	1023
Other Private	5.11	288	4.92	355

Table E7.2
Standard Errors for Percentages of 1992 High School Seniors Participating in Student Government or Volunteer Work (Cont'd)

	Student Government During the Current School Year		**Community Volunteer Work During Past Two Years**	
	SE	**Unweighted N**	**SE**	**Unweighted N**
Percent Receiving Subsidized Lunch				
10% or Less	0.9	6095	1.64	6509
11% to 49%	1.26	5888	1.25	6353
50% or More	1.9	1298	2.34	1430

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table E7.3
Standard Errors for Percentages of 1992 High School Seniors Reporting Illicit Drug Use: Marijuana and Cocaine

	Marijuana: Lifetime		Marijuana: During the Past Year		Marijuana: During the Past Month		Cocaine: Lifetime		Cocaine: During the Past Year		Cocaine: During the Past Month	
	SE	Unweighted N	SE	Unweighted N	SE	Unweighted N	SE	Unweighted N	SE	Unweighted N	SE	Unweighted N
Standard Errors												
Total	0.61	13945	0.5	13848	0.35	13848	0.25	13987	0.15	13966	0.11	13972
Gender												
Male	0.87	6774	0.71	6711	0.55	6711	0.41	6795	0.24	6787	0.19	6792
Female	0.75	7171	0.67	7137	0.38	7137	0.26	7192	0.16	7179	0.09	7180
Race/Ethnicity												
Asian/Pacific Islander	1.6	1005	1.4	1002	0.79	1001	0.62	1013	0.46	1013	0.31	1013
Hispanic	1.79	1526	1.39	1512	0.84	1518	1.32	1529	0.66	1522	0.66	1526
Black	2.22	1227	1.54	1214	0.68	1209	0.39	1227	0.16	1224	0.14	1224
White	0.67	10001	0.59	9937	0.43	9936	0.27	10030	0.17	10019	0.1	10021
Parents' Education												
Less than H.S.	1.81	1034	1.3	1026	1.02	1021	1.38	1041	0.87	1038	0.82	1039
High School Graduate/GED	1.11	3482	0.91	3457	0.71	3457	0.43	3493	0.27	3485	0.19	3488
Some College Work	1.14	2996	1.02	2976	0.63	2976	0.44	2993	0.25	2992	0.15	2995
Completed College	1.26	2511	1.1	2494	0.83	2496	0.46	2525	0.33	2522	0.18	2521
Graduate Degree	1.5	2746	1.39	2731	0.88	2731	0.44	2757	0.25	2754	0.18	2753
Region												
Northeast	1.13	2819	1.04	2810	0.85	2802	0.55	2833	0.35	2831	0.22	2831
Midwest	1.21	3829	1.07	3798	0.75	3806	0.36	3839	0.25	3836	0.19	3837
South	1.07	4469	0.84	4432	0.5	4435	0.45	4471	0.25	4462	0.1	4461
West	1.34	2811	1.12	2785	0.77	2788	0.64	2827	0.41	2820	0.37	2826

BEST COPY AVAILABLE

Table E7.3
Standard Errors for Percentages of 1992 High School Seniors Reporting Illicit Drug Use: Marijuana and Cocaine (Cont'd)

	Marijuana: Lifetime		Marijuana: During the Past Year		Marijuana: During the Past Month		Cocaine: Lifetime		Cocaine: During the Past Year		Cocaine: During the Past Month	
	SE	Unweighted N	SE	Unweighted N	SE	Unweighted N	SE	Unweighted N	SE	Unweighted N	SE	Unweighted N
Tested Proficiency												
Below basic in at least one area	1.57	2120	1.08	2098	0.82	2104	0.62	2125	0.47	2124	0.36	2126
At least basic in all areas	0.7	9574	0.59	9510	0.42	9508	0.3	9588	0.15	9575	0.1	9577
Native Language												
English	0.62	12120	0.53	12037	0.38	12037	0.24	12153	0.15	12135	0.09	12139
Non-English	2.02	1508	1.81	1496	0.76	1496	1.3	1515	0.66	1511	0.62	1513
High School Program												
General	0.96	4930	0.79	4885	0.52	4885	0.45	4935	0.27	4924	0.21	4925
College Preparatory	0.81	6858	0.7	6824	0.49	6824	0.26	6870	0.16	6866	0.1	6868
Vocational	1.57	1471	1.33	1459	1.14	1456	0.79	1485	0.61	1481	0.29	1482
New Basics Courses Taken												
Less than minimum	1.26	4530	1.05	4484	0.72	4484	0.68	4544	0.35	4536	0.2	4539
Minimum: 4E+3SS+2S+2M	1.88	2608	1.05	2582	0.7	2580	0.89	2614	0.39	2604	0.27	2606
Minimum +1M+1S	2.16	2998	2.01	2990	0.6	2990	0.42	3015	0.17	3015	0.13	3015
Minimum +1M+1S+2FL+.5CS	1.33	2271	1	2263	0.71	2264	0.53	2273	0.33	2273	0.11	2273
Class Rank												
Highest Quarter	0.97	3418	0.68	3406	0.5	3408	0.27	3419	0.14	3418	0.12	3418
Third Quarter	1.96	2909	1.96	2889	0.56	2888	0.57	2911	0.23	2906	0.16	2908
Second Quarter	1.91	2493	1.25	2477	0.87	2483	1.11	2506	0.41	2500	0.22	2502
Lowest Quarter	2.12	1935	1.6	1907	1.01	1906	0.79	1945	0.47	1941	0.33	1943

Table E7.3
Standard Errors for Percentages of 1992 High School Seniors Reporting Illicit Drug Use: Marijuana and Cocaine (Cont'd)

	Marijuana: Lifetime		**Marijuana: During the Past Year**		**Marijuana: During the Past Month**		**Cocaine: Lifetime**		**Cocaine: During the Past Year**		**Cocaine: During the Past Month**	
	SE	**Unweighted N**	**SE**	**Unweighted N**	**SE**	**Unweighted N**	**SE**	**Unweighted N**	**SE**	**Unweighted N**	**SE**	**Unweighted N**
Plans for Next Year												
Four-Year College	0.78	7566	0.7	7521	0.42	7524	0.22	7584	0.14	7579	0.07	7578
Two-Year Academic	1.54	1562	1.29	1553	1	1553	0.7	1562	0.49	1559	0.39	1561
Two-Year Vocational/Trade	1.71	1117	1.26	1115	1.05	1117	0.67	1126	0.46	1125	0.41	1126
Will not Attend School	1.27	2655	1.14	2627	0.88	2626	0.64	2671	0.41	2662	0.24	2666
Uncertain	2.71	633	1.93	628	1.61	625	1.96	632	0.84	629	0.57	629
Urbanicity of School												
Urban	1.17	3950	1.01	3923	0.63	3920	0.5	3971	0.29	3967	0.11	3970
Suburban	0.97	5597	0.85	5572	0.62	5572	0.37	5615	0.21	5610	0.15	5612
Rural	0.99	4352	0.78	4307	0.59	4310	0.4	4355	0.28	4343	0.25	4344
Type of School												
Public	0.64	11869	0.53	11774	0.37	11774	0.27	11894	0.16	11873	0.12	11880
Catholic	2.18	834	1.99	836	1.22	836	0.92	845	0.6	844	0.15	844
NAIS Private	6.75	907	6.26	904	5.62	905	1.52	914	1.49	915	1.43	914
Other Private	4.02	318	2.64	317	0.86	316	0.38	317	0.26	317	0.22	317
Percent Receiving Subsidized Lunch												
10% or less	1.46	5922	1.25	5886	0.62	5887	0.43	5948	0.22	5944	0.11	5944
11% to 49%	1.03	5647	0.7	5602	0.5	5605	0.31	5668	0.21	5655	0.15	5658
50% or more	2.61	1213	2.02	1204	1.27	1200	2.27	1210	0.7	1208	0.52	1209

Table E7.3
Standard Errors for Percentages of 1992 High School Seniors Reporting Illicit Drug Use: Marijuana and Cocaine

	Marijuana: Lifetime		Marijuana: During the Past Year		Marijuana: During the Past Month		Cocaine: Lifetime		Cocaine: During the Past Year		Cocaine: During the Past Month	
	SE	Unweighted N	SE	Unweighted N	SE	Unweighted N	SE	Unweighted N	SE	Unweighted N	SE	Unweighted N
Socioeconomic Status												
Low	1.16	3231	0.87	3200	0.75	3200	0.65	3238	0.36	3228	0.30	3233
Middle	0.87	6603	0.76	6556	0.45	6557	0.31	6619	0.19	6615	0.12	6617
High	1.10	4002	0.98	3984	0.76	3983	0.37	4021	0.21	4014	0.14	4013

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table E7.4
Standard Errors for Percentages of 1992 High School Seniors Reporting Alcohol Use

	Alcohol Lifetime		**Alcohol During Past Year**		**Alcohol During Past Month**		**Had 5 or More Drinks in a Row During past 2 Weeks**	
	SE	**Unweighted N**	**SE**	**Unweighted N**	**SE**	**Unweighted N**	**SE**	**Unweighted N**
Standard Errors								
Total	0.48	14483	0.66	14203	0.75	14213	0.62	14682
Gender								
Male	0.59	7062	0.86	6935	1.03	6953	0.94	7168
Female	0.69	7421	0.86	7268	0.94	7260	0.66	7514
Race/Ethnicity								
Asian/Pacific Islander	1.76	1042	2.32	1027	2.51	1025	1.72	1055
Hispanic	1.14	1588	2.14	1525	1.98	1534	1.74	1598
Black	1.58	1258	2.2	1201	2.2	1192	1.35	1284
White	0.55	10401	0.69	10263	0.84	10274	0.73	10551
Parents' Education								
Less than High School	1.42	1081	2.04	1053	2.31	1057	1.84	1095
High School Graduate/GED	0.86	3596	1.11	3515	1.22	3523	1.1	3653
Some College Work	0.76	3098	1.05	3032	1.31	3033	1.08	3140
Completed College	1.02	2578	1.34	2549	1.69	2550	1.56	2620
Graduate Degree	1.34	2851	1.7	2805	1.96	2807	1.25	2888
Socioeconomic Status								
Low	0.90	3336	1.27	3261	1.27	3265	1.10	3383
Middle	0.55	6819	0.84	6667	0.99	6668	0.80	6918
High	0.77	4164	1.09	4112	1.35	4117	1.24	4216
Region								
Northeast	1.4	2919	1.4	2856	1.51	2860	1.3	2968
Midwest	0.64	3929	0.89	3855	1.49	3856	1.35	3998
South	0.79	4706	1.32	4632	1.38	4626	1.09	4755
West	1.1	2906	1.65	2837	1.56	2849	1.16	2937

Table E7.4
Standard Errors for Percentages of 1992 High School Seniors Reporting Alcohol Use (Cont'd)

	Alcohol Lifetime		Alcohol During Past Year		Alcohol During Past Month		Had 5 or More Drinks in a Row During past 2 Weeks	
	SE	Unweighted N	SE	Unweighted N	SE	Unweighted N	SE	Unweighted N
Tested Proficiency								
Below basic in at least one area	1.04	2114	1.41	2039	1.82	2036	1.67	2157
At least basic in all areas	0.57	9502	0.71	9346	0.86	9359	0.71	9634
New Basics Courses Taken								
Minimum: 4E+3SS+2S+2M	0.96	2630	1.77	2591	2.31	2594	1.53	2690
Minimum +1M+1S	1.17	3030	1.97	2958	2.34	2957	1.82	3075
Minimum +1M+1S+2FL+.5CS	1.24	2302	1.77	2274	1.91	2236	1.39	2313
Class Rank								
Highest Quarter	1.12	3471	1.55	3406	1.54	3402	0.95	3493
Third Quarter	0.85	2923	1.47	2870	1.99	2865	1.4	2975
Second Quarter	0.69	2541	1.16	2470	2.01	2486	2	2586
Lowest Quarter	0.78	1991	1.85	1948	2.12	1965	1.85	2043
Plans for Next Year								
Four-Year College	0.73	7778	0.97	7649	1.09	7646	0.83	7882
Two-Year Academic	1.15	1635	1.75	1598	1.76	1602	1.44	1659
Two-Year Vocational/Trade	1.29	1162	1.83	1138	2.14	1144	1.8	1190
Will not attend school	0.8	2818	1.18	2757	1.27	2757	1.15	2855
Uncertain	1.4	634	2.41	617	2.64	620	2.39	647
Urbanicity of School								
Urban	1.25	4128	1.71	4037	1.63	4041	1.17	4151
Suburban	0.65	5847	0.88	5731	1.07	5743	0.93	5951
Rural	0.6	4455	0.94	4382	1.28	4377	1.18	4526

Table E7.4
Standard Errors for Percentages of 1992 High School Seniors Reporting Alcohol Use (Cont'd)

	Alcohol Lifetime		**Alcohol During Past Year**		**Alcohol During Past Month**		**Had 5 or More Drinks in a Row During past 2 Weeks**	
	SE	**Unweighted N**	**SE**	**Unweighted N**	**SE**	**Unweighted N**	**SE**	**Unweighted N**
Type of School								
Public	0.46	12313	0.67	12062	0.76	12070	0.65	12480
Catholic	1.67	860	2.67	846	3	847	2.67	870
NAIS Private	1.95	962	2.47	948	8.25	952	4.85	973
Other Private	5.53	325	6.31	324	5.81	322	3.44	335
Percent Receiving Subsidized Lunch								
10% or Less	0.84	6041	1.29	5942	1.59	5950	1.27	6133
11% to 49%	0.66	5775	1.08	5641	1.31	5655	0.99	5865
50% or More	1.62	1247	2.75	1220	2.75	1208	2.49	1254
Native Language								
English	0.49	12531	0.66	12304	0.78	12317	0.66	12711
Not English	1.62	1574	2.67	1527	2.21	1526	1.88	1584
High School Program								
General	0.65	5181	0.89	5059	1.1	5086	0.98	5257
College Preparatory	0.78	7089	1.02	6980	1.02	6974	0.81	7163
Vocational	1.03	1514	1.43	1481	1.92	1474	1.61	1542

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table E7.5
Standard Errors for Percentages of 1992 High School Seniors Reporting Various Amounts of Television Watching

	10 Hours/ Week or Less	11-20 Hours/ Week	More than 20 Hours/ Week	N
Total	0.5	0.6	0.7	15199
Gender				
Male	0.7	0.8	0.9	7498
Female	0.8	0.8	0.9	7701
Race/Ethnicity				
Asian/Pacific Islander	2.2	2.1	2.4	1092
Hispanic	1.7	1.6	1.8	1725
Black	2.1	1.7	2.4	1308
White	0.6	0.7	0.7	10873
Socioeconomic Status				
Low	1.0	1.0	1.2	3527
Middle	0.8	0.9	1.3	7139
High	1.2	0.9	1.2	4366
Parents' Education				
Less than High School	1.7	1.7	2.0	1153
High School Graduate/GED	1.0	1.1	1.1	3769
Some College Work	1.0	1.2	1.3	3243
Completed College	1.1	1.3	1.5	2708
Graduate Degree	1.6	1.5	1.3	2958
Region				
Northeast	1.2	1.4	1.4	2983
Midwest	1.0	1.0	1.2	4069
South	1.0	1.2	1.2	5046
West	1.1	1.2	1.4	3077

Table E7.5
Standard Errors for Percentages of 1992 High School Seniors Reporting Various Amounts of Television Watching (Cont'd)

	10 Hours/ Week or Less	11-20 Hours/ Week	More than 20 Hours/ Week	N
Tested Proficiency				
Below basic in at least one area	1.2	1.4	1.7	2240
At least basic in all areas	0.6	1.7	0.7	10083
Native Language				
English	0.6	0.6	0.7	13096
Non-English	1.7	1.7	2.0	1718
High School Program				
General	0.8	0.9	1.0	5450
College Preparation	0.8	0.9	0.9	7421
Vocational	1.2	1.6	1.7	1584
Class Rank				
Highest Quartile	1.1	1.1	1.1	3603
Third Quartile	1.2	1.2	1.3	3098
Second Quartile	1.1	1.3	1.6	2724
Lowest Quartile	1.1	1.4	1.5	2102
Plans For Next Year				
Four-Year College	0.8	0.8	1.0	8086
Two-Year Academic	1.7	1.7	1.6	1706
Two-Year Vocational/Trade	1.4	2.1	2.0	1240
Will not attend school	1.0	1.1	1.2	2906
Uncertain	2.1	2.5	2.5	662
Urbanicity				
Urban.	1.2	1.3	1.4	4310
Suburban	0.8	0.9	1.1	6159
Rural	0.8	1.0	1.0	4678

Table E7.5
Standard Errors for Percentages of 1992 High School Seniors Reporting Various Amounts of Television Watching (Cont'd)

	10 Hours/ Week or Less	11-20 Hours/ Week	More than 20 Hours/ Week	N
Type of School				
Public	0.6	0.6	0.7	12942
Catholic	2.1	2.5	2.9	881
NAIS Private	5.7	6.1	9.5	1007
Other Private	3.9	5.5	4.2	345
Percent Receiving Subsidized Lunch				
10% or less	0.8	0.9	1.0	6347
11% to 49%	0.8	0.9	1.0	6074
50% or more	1.5	1.6	1.8	1333

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Appendix F: Tables of Ancillary Analyses of Plans and Expectations (Chapter 6)

Table F6.1a
Educational Expectations of 1992 High School Seniors and their Parents by Socioeconomic Status

Respondent's report of:	High School or Less	Some College or Trade	College Degree	Graduate Degree	Don't Know
How far in school father wants respondent to go					
Low SES	10.6	26.0	28.5	20.0	14.9
Middle SES	5.0	17.3	43.8	24.8	9.1
High SES	0.8	4.1	40.3	50.8	4.0
How far in school mother wants respondent to go					
Low SES	9.4	25.8	31.3	22.2	11.3
Middle SES	4.2	17.7	43.2	27.6	7.2
High SES	0.7	5.6	41.2	49.0	3.4
How far in school respondent thinks he/she will get					
Low SES	10.0	37.0	25.8	19.6	7.7
Middle SES	4.6	25.4	37.9	26.6	5.4
High SES	1.1	7.8	34.9	52.9	3.3

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table F6.1b
Educational Expectations of 1992 High School Seniors and Their Parents by Race

Respondent's report of:	**Asian**	**Hispanic**	**Black**	**White**
How far in school father wants respondent to go:				
High School or Less	2.4	6.1	6.1	4.9
Some College or Trade	9.4	18.7	11.8	16.0
College Degree	35.7	33.7	30.9	41.8
Graduate Degree	47.4	31.9	38.7	28.6
Don't Know	5.2	12.4	12.4	8.7
How far in school mother wants respondent to go:				
High School or Less	3.4	5.3	4.8	4.4
Some College or Trade	10.2	19.6	12.4	17.0
College Degree	36.4	33.8	33.0	42.2
Graduate Degree	44.6	33.7	42.0	29.3
Don't Know	5.3	7.6	7.8	7.1
How far in school respondent thinks he/she will get:				
High School or Less	2.8	5.8	4.4	5.1
Some College or Trade	18.1	28.9	21.8	23.9
College Degree	34.0	28.8	31.6	35.4
Graduate Degree	40.4	28.5	35.3	30.7
Don't Know	4.8	8.0	6.9	4.9

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table F6.2a
Percent of 1992 High School Seniors Most Likely to Study Various Academic Fields by Socioeconomic Status

	Low SES	Middle SES	High SES
Agriculture	1.1	1.4	1.3
Architecture	1.1	1.8	1.5
Art	2.4	2.8	3.6
Biological Sciences	1.2	2.7	4.0
Business	12.5	13.6	15.2
Communications	1.6	2.6	5.1
Computer & Info Science	2.6	2.5	1.4
Education	5.3	7.5	7.4
Engineering	4.3	7.0	9.4
English	0.5	1.5	2.9
Ethnic Studies	0.1	0.0	0.7
Foreign Languages	0.2	0.4	0.8
Health Occupations	7.7	7.8	5.2
Home Economics	0.9	0.6	0.6
Interdisciplinary Studies	0.2	0.1	0.4
Mathematics	0.3	0.7	0.9
Music	1.2	1.5	1.4
Philosophy	0.0	0.2	0.8
Physical Science	0.6	1.1	2.3
Pre-Professional	4.5	6.2	12.3
Psychology	3.0	3.9	5.4
Social Sciences	2.8	3.4	5.0
Other	7.7	7.9	6.3
Legitimate Skip	38.2	22.8	6.0

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table F6.2b
Percent of 1992 High School Seniors Most Likely to Study Various Academic Fields by Race

	Asian	Hispanic	Black	White
Agriculture	0.6	1.2	0.2	1.5
Architecture	1.4	2.4	1.3	1.5
Art	3.8	3.2	1.6	3.0
Biological Sciences	3.4	1.0	1.7	2.9
Business	18.7	15.5	15.0	13.1
Communications	3.3	2.2	4.1	2.9
Computer & Info Science	2.3	3.8	5.2	1.6
Education	3.6	5.0	4.2	7.8
Engineering	11.8	6.0	8.0	6.5
English	0.9	1.0	0.7	1.8
Ethnic Studies	0.0	0.1	0.0	0.3
Foreign Languages	0.3	0.5	0.4	0.5
Health Occupations	8.5	5.7	9.9	6.7
Home Economics	0.2	1.0	0.6	0.6
Interdisciplinary Studies	0.1	0.1	0.1	0.2
Mathematics	0.7	0.1	0.7	0.7
Music	1.1	1.2	0.9	1.6
Philosophy	0.2	0.2	0.0	0.4
Physical Science	1.6	0.8	0.9	1.4
Pre-Professional	12.1	7.9	6.3	7.1
Psychology	3.8	4.6	3.4	4.1
Social Sciences	3.0	4.1	2.9	3.8
Other	6.2	9.1	5.8	7.6
Legitimate Skip	12.4	23.4	26.0	22.4

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table F6.3a
Percent of 1992 High School Seniors Most Likely to Pursue Various Types of Non-academic Training by Socioeconomic Status

	Low SES	Middle SES	High SES
Agriculture	0.2	0.6	0.1
Auto Mechanics	3.3	1.9	0.2
Aviation	0.6	0.6	0.2
Accounting	1.4	0.5	0.3
Business Management	1.6	0.9	0.4
Secretarial & Related	2.4	1.0	0.0
Other Business & Office	0.6	0.6	0.1
Commercial Arts	0.8	0.9	0.2
Computer Programming/DP	1.7	1.0	0.5
Construction Trades	1.1	0.6	0.3
Cosmetology/Hair Styling	2.2	1.2	0.4
Drafting	0.7	0.7	0.1
Electronics	1.8	1.2	0.4
Food Service	0.7	0.4	0.1
Health Care	3.2	1.7	0.5
Home Economics	0.6	0.3	0.0
Hotel & Restaurant Management	0.5	0.2	0.1
Marketing & Distribution	0.3	0.2	0.2
Metal Working	1.3	0.4	0.1
Protective Services	0.7	0.6	0.2
Refrigeration, Heating & A.C.	0.3	0.5	0.0
Transportation & Material Moving	0.6	0.1	0.1
Other	3.5	3.0	1.1
Legitimate Skip	69.9	80.8	94.2

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table F6.3b
Percent of 1992 High School Seniors Most Likely to Pursue Various Types of Non-academic Training by Race

	Asian	Hispanic	Black	White
Agriculture	0.2	0.1	0.1	0.5
Auto Mechanics	1.4	2.5	2.4	1.7
Aviation	0.4	0.8	0.4	0.4
Accounting	0.1	0.7	1.2	0.6
Business Management	0.4	1.1	1.4	0.9
Secretarial & Related	0.6	1.6	0.8	1.1
Other Business & Office	0.2	0.4	1.2	0.4
Commercial Arts	1.0	1.0	0.3	0.7
Computer Programming/DP	0.5	1.4	1.5	1.0
Construction Trades	0.3	0.8	0.6	0.6
Cosmetology/Hair Styling	0.0	0.8	1.4	1.4
Drafting	1.0	0.5	0.4	0.6
Electronics	0.5	1.0	2.4	1.0
Food Service	0.2	0.2	0.9	0.4
Health Care	0.9	2.1	2.0	1.7
Home Economics	0.0	0.2	0.6	0.3
Hotel & Restaurant Management	0.0	0.7	0.2	0.2
Marketing & Distribution	0.2	0.1	0.1	0.2
Metal Working	0.1	0.1	0.3	0.7
Protective Services	0.2	0.5	0.1	0.6
Refrigeration, Heating & A.C.	0.0	0.3	0.2	0.4
Transportation & Material Moving	0.0	0.0	0.0	0.2
Other	2.6	2.3	2.2	2.8
Legitimate Skip	89.1	80.7	79.6	81.5

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table F6.4a
Percent of 1992 High School Seniors Expecting to Have Various Occupations at Age 30 by Socioeconomic Status

	Low SES	Middle SES	High SES
Office Worker	6.4	2.7	0.7
Tradesperson	4.1	2.6	0.5
Farmer	1.3	0.9	0.4
Full-Time Homemaker	1.0	0.9	1.3
Laborer	1.1	0.7	0.1
Manager	5.7	5.4	4.6
Military	4.4	3.1	1.2
Machine Operator	2.6	0.6	0.2
Elementary/Secondary School Teacher	6.1	7.6	8.6
Professional I*	22.8	27.8	31.1
Professional II**	10.9	16.3	27.8
Small Business Owner	7.0	6.2	4.6
Protective Services	5.0	3.8	2.2
Sales	1.4	1.4	2.5
Service Worker	4.3	2.1	0.8
Technical	6.5	5.8	3.6
Not Planning to Work	0.4	0.1	0.1
Other	8.7	11.2	9.6
Will Be in School	0.3	0.5	0.1

* Professional I = Accountant, Registered Nurse, Engineer, Banker, Librarian, Writer, Social Worker, Actor, Athlete, Artist, Politician, but not Including School Teacher.

** Professional II = Minister, Dentist, Doctor, Lawyer, Scientist, College Teacher.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table F6.4b
Percent of 1992 High School Seniors Expecting to Have Various Occupations at Age 30 by Race

	Asian	Hispanic	Black	White
Office Worker	2.5	4.7	3.2	2.9
Tradesperson	1.9	2.2	1.8	2.7
Farmer	0.0	0.7	0.6	1.0
Full-Time Homemaker	0.8	0.7	0.4	1.2
Laborer	1.2	0.6	0.3	0.7
Manager	6.6	5.2	7.3	4.8
Military	1.4	2.4	5.5	2.6
Machine Operator	0.5	0.4	1.5	1.1
Elementary/Secondary School Teacher	3.4	6.6	3.6	8.4
Professional I*	28.0	24.6	30.4	27.4
Professional II**	26.6	17.2	16.5	17.7
Small Business Owner	7.0	7.7	6.7	5.6
Protective Services	3.6	5.0	2.1	3.8
Sales	1.6	1.7	2.0	1.7
Service Worker	0.6	2.4	3.0	2.3
Technical	6.0	7.5	5.4	5.0
Not Planning to Work	0.2	0.5	0.2	0.2
Other	8.0	9.6	7.8	10.7
Will Be in School	0.0	0.2	1.8	0.2

* Professional I = Accountant, Registered Nurse, Engineer, Banker, Librarian, Writer, Social Worker, Actor, Athlete, Artist, Politician, but not Including School Teacher.

** Professional II = Minister, Dentist, Doctor, Lawyer, Scientist, College Teacher.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table F6.5
Percent of 1992 High School Seniors Indicting Level of Education Necessary for the Job They Expect to Have at Age 30

	High School or Less	Some College	College Degree	Graduate Degree	Not Planning to Work
TOTAL	5.7	25.2	38.5	30.0	0.5
RACE					
Asian	4.2	17.5	34.7	43.5	0.2
Hispanic	5.6	30.1	37.4	26.8	0.2
Black	8.2	23.7	36.2	31.8	0.2
White	5.4	25.1	39.4	29.5	0.6
SES					
Low	10.0	38.7	33.7	17.2	0.5
Middle	5.9	26.8	41.4	25.5	0.5
High	1.3	8.4	38.0	51.7	0.5

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Appendix G: Standard Errors and Sample Sizes for the Estimates in Appendix F

Table G6.1a
Standard Errors for Educational Expectations of 1992 High School Seniors and Their Parents by Socioeconomic Status

Respondent's report of how far in school:	High School or Less	Some College	College Degree	Graduate Degree	Don't Know	N
Father wants respondent to go						
	SE	SE	SE	SE	SE	
Low SES	0.78	1.13	1.08	1.18	0.87	2877
Middle SES	0.42	0.69	0.94	0.77	0.51	6487
High SES	0.19	0.45	1.24	1.32	0.51	4190
Mother wants respondent to go						
Low SES	0.72	1.04	1.10	1.12	0.78	3268
Middle SES	0.37	0.69	0.92	0.80	0.47	6828
High SES	0.17	0.90	1.22	1.37	0.44	4268
Respondent thinks he/she will get						
Low SES	0.66	1.06	1.06	1.05	0.56	3685
Middle SES	0.31	0.77	0.88	0.74	0.51	7267
High SES	0.23	0.60	1.21	1.33	0.49	4406

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table G6.1b
Standard Errors (unweighted N) for Educational Expectations of 1992 High School Seniors and Their Parents by Race

Respondent's report of:	N =	Asian	Hispanic	Black	White	N
		(998)	(1443)	(1052)	(10023)	
How far in school father wants respondent to go:						
High School or Less		0.4	0.8	0.9	0.3	617
Some College		1.9	2.1	1.5	0.6	1967
College Degree		2.8	1.7	2.2	0.8	5296
Graduate Degree		2.8	2.1	2.6	0.8	4547
Don't Know		0.9	1.2	1.4	0.4	1213
	N =	(1039)	(1623)	(1253)	(10413)	
How far in school mother wants respondent to go:						
High School or Less		0.6	0.8	0.8	0.3	594
Some College		1.9	1.9	1.3	0.6	2183
College Degree		2.3	1.6	2.1	0.7	5701
Graduate Degree		2.3	1.8	2.4	0.8	4975
Don't Know		0.8	1.2	1.1	0.4	1011
	N =	(1118)	(1797)	(1419)	(10991)	
How far in school respondent thinks he/she will get:						
High School or Less		0.7	0.8	0.7	0.3	725
Some College		2.3	2.0	1.6	0.7	3498
College Degree		2.3	1.6	2.1	0.7	5161
Graduate Degree		2.4	1.6	2.1	0.8	5266
Don't Know		0.9	1.1	1.7	0.3	821

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table G6.2a
Standard Errors for Percentages of 1992 High School Seniors Most Likely to Study Various Academic Fields by Socioeconomic Status

	Low SES SE	Middle SES SE	High SES SE	N
Agriculture	0.36	0.16	0.21	187
Architecture	0.17	0.22	0.23	249
Art	0.30	0.28	0.37	469
Biological Sciences	0.21	0.24	0.48	433
Business	0.81	0.55	0.82	2141
Communications	0.23	0.28	0.57	435
Computer & Info Science	0.34	0.36	0.27	319
Education	0.52	0.40	0.59	1014
Engineering	0.39	0.45	0.71	1094
English	0.12	0.26	0.37	275
Ethnic Studies	0.05	0.01	0.65	15
Foreign Languages	0.08	0.10	0.14	91
Health Occupations	0.81	0.53	0.47	1035
Home Economics	0.24	0.11	0.16	94
Interdisciplinary Studies	0.08	0.03	0.16	33
Mathematics	0.09	0.15	0.20	93
Music	0.32	0.21	0.23	207
Philosophy	0.02	0.06	0.26	45
Physical Science	0.13	0.13	0.30	250
Pre Professional	0.49	0.37	1.21	1178
Psychology	0.39	0.42	0.55	619
Social Sciences	0.35	0.38	0.47	631
Other	0.68	0.42	0.54	1090
Legitimate Skip	1.19	0.84	0.56	3139
N =	3664	7158	4314	

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table G6.2b
Standard Errors (unweighted N) for Percentage of 1992 High School Seniors Most Likely to Study Various Academic Fields by Race

	Asian	Hispanic	Black	White	N
N =	(1102)	(1755)	(1385)	(10858)	
Agriculture	0.3	0.4	0.2	0.2	189
Architecture	0.4	0.6	0.4	0.2	251
Art	1.0	0.5	0.4	0.2	472
Biological Sciences	0.7	0.2	0.5	0.2	435
Business	2.3	1.4	1.3	0.5	2162
Communications	1.4	0.5	0.7	0.2	441
Computer & Info Science	0.6	0.8	1.2	0.2	321
Education	0.8	0.8	0.7	0.3	1015
Engineering	1.5	0.8	1.3	0.4	1095
English	0.3	0.3	0.2	0.2	277
Ethnic Studies	0.0	0.0	0.0	0.2	15
Foreign Languages	0.2	0.2	0.2	0.1	94
Health Occupations	1.3	0.7	1.6	0.4	1040
Home Economics	0.1	0.3	0.2	0.1	94
Interdisciplinary Studies	0.1	0.1	0.1	0.1	33
Mathematics	0.3	0.1	0.3	0.1	93
Music	0.5	0.5	0.4	0.2	210
Philosophy	0.2	0.1	0.0	0.1	45
Physical Science	0.5	0.2	0.3	0.1	253
Pre-Professional	1.4	0.9	0.8	0.5	1186
Psychology	0.8	0.8	1.3	0.3	620
Social Sciences	0.7	0.7	0.5	0.3	635
Other	1.0	1.2	0.9	0.3	1099
Legitimate Skip	1.8	1.5	2.4	0.7	3167

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table G6.3a
Standard Errors for Percentages of 1992 High School Seniors Most Likely to Pursue Various Types of Non-academic Training by Socioeconomic Status

	Low SES SE	Middle SES SE	High ES SE	N
Agriculture	0.08	0.10	0.05	56
Auto Mechanics	0.41	0.39	0.08	236
Aviation	0.16	0.14	0.08	62
Accounting	0.24	0.11	0.11	100
Business Management	0.28	0.14	0.14	137
Secretarial & Related	0.29	0.12	0.02	176
Other Business & Office	0.13	0.25	0.07	53
Commercial Arts	0.15	0.14	0.15	105
Computer Programming	0.25	0.17	0.16	151
Construction Trades	0.18	0.10	0.10	97
Cosmetology/Hair Styling	0.28	0.17	0.17	175
Drafting	0.17	0.14	0.06	81
Electronics	0.24	0.15	0.19	180
Food Service	0.24	0.22	0.05	41
Health Care	0.34	0.19	0.11	280
Home Economics	0.13	0.10	0.03	43
Hotel & Restaurant Management	0.26	0.06	0.05	26
Marketing & Distribution	0.08	0.05	0.20	32
Metal Working	0.28	0.08	0.05	72
Protective Services	0.13	0.11	0.07	93
Refrigeration, Heating & A.C.	0.10	0.16	0.03	43
Transportation & Material Moving	0.22	0.03	0.04	21
Other	0.45	0.32	0.20	386
Legitimate Skip	1.02	0.76	0.54	12636
N =	3646	7224	4412	

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table G6.3b
Percentages of 1992 High School Seniors Most Likely to Pursue Various Types of Non-academic Training by Race (unweighted N)

	Asian	Hispanic	Black	White	N
	(1122)	(1779)	(1398)	(10950)	
Agriculture	0.2	0.0	0.1	0.1	56
Auto Mechanics	0.4	0.6	1.5	0.1	244
Aviation	0.3	0.5	0.2	0.1	62
Accounting	0.1	0.2	0.4	0.1	101
Business Management	0.2	0.3	0.4	0.1	138
Secretarial & Related	0.3	0.4	0.2	0.1	177
Other Business & Office	0.2	0.2	1.0	0.1	53
Commercial Arts	0.7	0.3	0.1	0.1	106
Computer Programming	0.2	0.3	0.4	0.1	152
Construction Trades	0.2	0.2	0.2	0.1	99
Cosmetology/Hair Styling	0.0	0.2	0.3	0.2	174
Drafting	0.7	0.2	0.2	0.1	82
Electronics	0.3	0.2	0.6	0.1	179
Food Service	0.1	0.1	0.5	0.2	41
Health Care	0.3	0.5	0.4	0.2	281
Home Economics	0.0	0.1	0.4	0.0	43
Hotel & Restaurant Management	0.0	0.6	0.1	0.0	27
Marketing & Distribution	0.1	0.1	0.1	0.1	32
Metal Working	0.1	0.1	0.1	0.1	73
Protective Services	0.2	0.1	0.1	0.1	92
Refrigeration, Heating & A.C.	0.0	0.2	0.1	0.1	45
Transportation & Material Moving	0.0	0.0	0.0	0.1	21
Other	0.1	0.4	0.7	0.2	389
Legitimate Skip	1.7	1.4	2.2	0.6	12727

Source: **U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.**

Table G6.4a
Standard Errors for Percentages of 1992 High School Seniors Expecting to have Various Occupations at Age 30 by Socioeconomic Status

	Low SES SE	Middle SES SE	High SES SE	N
Office Worker	0.50	0.22	0.14	470
Tradesperson	0.36	0.23	0.11	355
Farmer	0.26	0.13	0.13	130
Full-Time Homemaker	0.21	0.15	0.29	152
Laborer	0.22	0.13	0.06	96
Manager	0.48	0.43	0.42	788
Military	0.47	0.46	0.24	368
Machine Operator	0.47	0.11	0.08	129
Elementary/Secondary School Teacher	0.55	0.40	0.64	1130
Professional I*	1.08	0.84	1.20	4091
Professional II*	0.71	0.67	1.32	3037
Small Business Owner	0.61	0.40	0.48	889
Protective Services	0.52	0.28	0.26	545
Sales	0.33	0.16	0.54	255
Service Worker	0.48	0.20	0.19	318
Technical	0.47	0.42	0.45	788
Not Planning to Work	0.16	0.04	0.04	35
Other	0.62	0.60	0.86	1491
Will Be in School	0.14	0.28	0.06	29
N =	3577	7146	4373	

* Professional I = Accountant, Registered Nurse, Engineer, Banker, Librarian, Writer, Social Worker, Actor, Athlete, Artist, Politician, but not Including School Teacher.

** Professional II = Minister, Dentist, Doctor, Lawyer, Scientist, College Teacher.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table G6.4b
Standard Errors for Percentage of 1992 High School Seniors Expecting to Have Various Occupations at Age 30 by Race

	Asian	Hispanic	Black	White	N
Office Worker	0.6	0.7	0.6	0.2	473
Tradesperson	0.8	0.4	0.4	0.2	363
Farmer	0.0	0.3	0.3	0.1	131
Full-Time Homemaker	0.3	0.2	0.1	0.2	153
Laborer	0.6	0.2	0.2	0.1	97
Manager	1.6	0.8	1.3	0.3	795
Military	0.5	0.6	1.6	0.2	369
Machine Operator	0.3	0.1	0.6	0.2	130
Elementary/Secondary School Teacher	0.6	0.9	0.6	0.4	1133
Professional I*	2.2	1.7	2.1	0.6	4119
Professional II**	2.1	1.2	1.2	0.6	3054
Small Business Owner	1.4	0.9	0.8	0.3	901
Protective Services	0.9	0.7	0.7	0.2	552
Sales	0.4	0.4	0.4	0.2	257
Service Worker	0.2	0.7	0.5	0.2	324
Technical	1.1	0.9	0.7	0.3	792
Not Planning to Work	0.1	0.3	0.1	0.0	37
Other	1.7	0.9	1.0	0.5	1501
Will Be in School	0.0	0.1	1.2	0.1	29

*	Professional I =	Accountant, Registered Nurse, Engineer, Banker, Librarian, Writer, Social Worker, Actor, Athlete, Artist, Politician, but not Including School Teacher.
**	Professional II =	Minister, Dentist, Doctor, Lawyer, Scientist, College Teacher.

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Table G6.5
Standard Errors for Percentages of 1992 High School Seniors Indicting Level of Education Necessary for the Job They Expect to Have at Age 30

	High School or Less	Some College	College Degree	Graduate Degree	Not Planning to Work	N
TOTAL	5.7	25.2	38.5	30.0	0.5	15198
RACE						
Asian	0.8	2.4	2.3	2.4	0.1	1083
Hispanic	0.6	1.6	1.7	1.6	0.2	1722
Black	1.8	1.8	0.7	0.8	0.1	1346
White	0.3	0.7	4.3	4.8	0.8	10837
SES						
Low	0.7	1.1	1.2	0.9	0.2	3565
Middle	0.6	0.8	0.9	0.8	0.1	7118
High	0.2	0.8	1.1	1.3	0.1	4340

Source: U.S. Department of Education, National Center for Education Statistics, National Education Longitudinal Study of 1988: Second Follow-Up, 1992.

Appendix H: NCES NELS:88 Publications

APPENDIX H

NELS:88 Key Technical Documentation: Listing; NELS:88 Analysis Reports, Tabulations and Statistical Briefs: Listing and Content Abstract

LISTING OF KEY TECHNICAL DOCUMENTATION AVAILABLE FROM NCES

Ingels, S.J., Abraham, S., Rasinski, K.A., Karr, R., Spencer, B.D., and Frankel, M.R. *NELS:88 Base Year Data File User's Manuals*, 1990:
- *1988 Student Component:* NCES 90-464;
- *1988 Parent Component:* NCES 90-466;
- *1988 School Component:* NCES 90-482;
- *1988 Teacher Component:* NCES 90-484.

Spencer, B.D., Frankel, M.R., Ingels, S.J., Rasinski, K.A., and Tourangeau, R. *NELS:88 Base Year Sample Design Report*, 1990; NCES 90-463.

Rock, D.A., and Pollack, J.M. *Psychometric Report for the NELS:88 Base Year Test Battery*, 1991; NCES 91-468.

Ingels, S.J., Scott, L.A., Lindmark, J.T., Frankel, M.R., and Myers, S.L. *NELS:88 First Follow-Up Data File User's Manuals*, 1992:
- *1990 Student Component:* NCES 92-030;
- *1990 School Component:* NCES 92-084;
- *1990 Dropout Component*: NCES 92-083;
- *1990 Teacher Component:* NCES 92-085.

Ingels, S.J., Scott, L.A., Rock, D.A., Pollack, J.M., Rasinski, K.A. *NELS:88 First Follow-Up Final Technical Report*, 1994; Washington, D.C.: NCES 94-632.

Ingels, S.J., Dowd, K.L., Baldridge, J.D., Stipe, J.L., Bartot, V.H., Frankel, M.R. *NELS:88 Second Follow-Up (1992): Student Component Data File User's Manual*, 1994; NCES 93-374.

Ingels, S.J., Dowd, K.L., Stipe, J.L., Baldridge, J.D., Bartot, V.H., Frankel, M.R. *NELS:88 Second Follow-Up (1992): Dropout Component Data File User's Manual*, 1994; NCES 93-375.

Ingels, S.J., Thalji, L., Pulliam, P., Bartot, V.H., Frankel, M.R. *NELS:88 Second Follow-Up (1992): Parent Component Data File User's Manual*, 1994; NCES 94-378.

Ingels, S.J., Thalji, L., Pulliam, P., Bartot, V.H., Frankel, M.R. *NELS:88 Second Follow-Up (1992): Teacher Component Data File User's Manual*, 1994; NCES 94-379.

Ingels, S.J., Thalji, L., Pulliam, P., Bartot, V.H., Frankel, M.R. *NELS:88 Second Follow-Up (1992): School Component Data File User's Manual*, 1994; NCES 94-376.

Ingels, S.J., Dowd, K.L., Taylor, J.R., Bartot, V.H., Frankel, M.R. *NELS:88 Second Follow-Up (1992): Transcript Component Data File User's Manual*, 1995; NCES 94-377.

Ingels, S.J., and Dowd, K.L. *Conducting Trend Analyses: HS&B and NELS:88 Sophomore Cohort Dropouts*, 1995; Washington, D.C.: NCES Working Paper Series, 95-07.

Ingels, S.J., and Baldridge, J.B. *Conducting Trend Analyses: NLS-72, HS&B, and NELS:88 Seniors*, 1995; Washington, D.C.: NCES Working Paper Series, 95-05.

Ingels, S.J., and Taylor, J.R. *Conducting Cross-Cohort Comparisons Using HS&B, NAEP, and NELS:88 Academic Transcript Data*, 1995; Washington, D.C.: NCES Working Paper Series, 95-06.

Ingels, S.J., and Dowd, K.L. *NELS:88 Second Follow-Up Questionnaire Content Areas and Research Issues*, 1995, Washington, D.C.: NCES Working Paper Series, 95-04.

Rock, D.A., and Pollack, J.M. *NELS:88 Base Year through Second Follow-Up Psychometric Report*, forthcoming, 1995; Washington, D.C.: NCES 94-382.

Ingels, S.J. *Sample Exclusion and Undercoverage in NELS:88: Characteristics of Base Year Ineligible Students; Changes in Eligibility Status after Four Years*, 1995; Washington, D.C.: NCES 95-723.

NELS:88 Base Year Through Second Follow-Up Sample Design Report, forthcoming, 1995 Washington, D.C.: NCES 94-250.

LISTING OF ANALYTIC PUBLICATIONS

1. Hafner, A., Ingels, S.J., Schneider, B., and Stevenson, D.L. *A Profile of the American Eighth Grader*, 1990; NCES 90-458.

2. Rasinski, K.A., and West, J. *NELS:88: Eighth Graders' Reports of Courses Taken During the 1988 Academic Year by Selected Student Characteristics*, 1990; NCES 90-459.

3. Hoachlander, E.G. *A Profile of Schools Attended by Eighth Graders in 1988*, 1991; NCES 91-129.

4. Rock, D.A., Pollack, J.M., and Hafner, A. *The Tested Achievement of the National Education Longitudinal Study of 1988 Eighth-Grade Class*, 1991; NCES 91-460.

5. Kaufman, P., and Rasinski, K.A. *Quality of Responses of Eighth-Grade Students to the NELS:88 Base Year Questionnaire*, 1991; NCES 91-487.

6. McMillen, M. *Eighth to Tenth Grade Dropouts*, 1992; Statistics in Brief series, NCES 92-006.

7. Owings, J.A., and Peng, S. *Transitions Experienced by 1988 Eighth Graders*, 1992. NCES 92-023.

8. Kaufman, P., and Bradby, D. *Characteristics of At-Risk Students in NELS:88*, 1992; NCES 92-042.

9. Bradby, D. *Language Characteristics and Academic Achievement: A Look at Asian and Hispanic Eighth Graders in NELS:88*, 1992; NCES 92-479.

10. Horn, L., and Hafner, A. *A Profile of American Eighth-Grade Mathematics and Science Instruction*, 1992; NCES 92-486.

11. Horn, L., and West, J. *A Profile of Parents of Eighth Graders*, 1992; NCES 92-488.

12. Green, P.J. *High School Seniors Look to the Future, 1972 and 1992*, 1993; Statistics in Brief series, NCES 93-473.

13. McMillen, M., Hausken, E., Kaufman, P., Ingels, S., Dowd, K., Frankel, M. and Qian, J. *Dropping Out of School: 1982 and 1992*, Issue Brief series, 1993; NCES 93-901.

14. Rasinski, K.A., Ingels, S.J., Rock, D.A., and Pollack, J. *America's High School Sophomores: A Ten Year Comparison, 1980 - 1990*, 1993; NCES 93-087.

15. Rock, D.A., Owings, J.A., and Lee, R. *Changes in Math Proficiency Between Eighth and Tenth Grades*. Statistics in Brief series, 1994, NCES 93-455.

16. Finn, J.D. *School Engagement and Students At Risk*. 1993; NCES 93-470.

17. Rasinski, K.A. *The Effect of High School Vocational Education on Academic Achievement Gain and High School Persistence: Evidence from NELS:88*, 1994; Report to the Office of Research, U.S. Department of Education.

18. Ingels, S.J., Schneider, B., Scott, L.A. and Plank, S.B. *A Profile of the American High School Sophomore in 1990*, NCES, 1994; NCES 95-086.

19. Myers, D., and Heiser, N. *Students' School Transition Patterns between Eighth and Tenth Grades Based on NELS:88*, forthcoming 1994; NCES 94-137.

20. Green, P.J., Dugoni, B.L., Ingels, S.J., and Camburn, E. *A Profile of the American High School Senior in 1992*, NCES, 1995; NCES 95-384.

21. Scott, L.A., Rock, D.A., Pollack, J.M., and Ingels, S.J. *Two Years Later: Cognitive Gains and School Transitions of NELS:88 Eighth Graders*, 1995, NCES 94-436.

22. Green, P.J., Dugoni, B.L., and Ingels, S.J. *Trends Among High School Seniors, 1972 - 1992*. NCES, 1995; NCES 95-380.

23. Hoffer, T. *High School Seniors' Instructional Experiences in Science and Mathematics*. forthcoming, 1995.

24. Green, P.J., and Scott, L.A. *"At-Risk" Eighth Graders Four Years Later*, NCES, 1995; NCES 95-736.

25. Rock, D.A., and Pollack, J.M. *Mathematics Course Taking and Gains in Mathematics Achievement.* NCES, 1995; NCES 95-714.

26. Hoffer, T.B., Rasinski, K.A., and Moore, W. *Social Background Differences in High School Mathematics and Science Coursetaking and Achievement.* NCES, 1995; NCES 95-206.

ABSTRACTS[54] OF ANALYTIC PUBLICATIONS

1. Hafner, A., Ingels, S.J., Schneider, B., and Stevenson, D.L. *A Profile of the American Eighth Grader*, 1990; NCES 90-458.

   Descriptive statistics and associated analysis on American eighth graders are presented based on data from the 1988 National Education Longitudinal Study. The study will be repeated with the same cohort at 2-year intervals. Study variables cover attitudes, school performance, and activities of the eighth-grade students. In addition to direct student data, the study design incorporates data from students' school principals, parents, and teachers to identify additional factors that affect student achievement. In addition to a general statistical profile of the target population, statistics and accompanying analyses cover mathematics and reading performance, at-risk issues, school safety and climate, and high school and college plans. Focus is on circumstances under which children flourish and succeed. The study included a clustered, stratified national probability sample of about 800 public and 200 private schools. Almost 25,000 students participated in the base-year study. The sample represents the nation's eighth-grade population, totalling about 3 million eighth-graders in over 38,000 school in the spring of 1988. Results reveal that the American eighth-grade population is very diverse. One out of every five students is unable to perform basic arithmetic tasks, and 14% of the students are unable to perform basic reading comprehension tasks. Pertinent methodological discussions and associated data are appended. (Fifteen graphs and 69 data tables are included; 66p.)

2. Rasinski, K.A., and West, J. *NELS:88: Eighth Graders' Reports of Courses Taken During the 1988 Academic Year by Selected Student Characteristics*, 1990; NCES 90-459.

   This set of tables examines self-reports of coursework taken by a national probability sample of eighth graders in public and private schools in the United States. Statistics were obtained from the base-year student survey of the National Education Longitudinal Study of 1988 (NELS:88). Estimates in the tables are based on a sample of 24,599 students in 1,052 schools across the nation. Technical notes follow 45 pages of tables. Three basic sets of tables on self-reported course-taking are provided in the areas of: (1) mathematics, science, and computer education (Tables 1.1 to 1.5); (2) English, foreign language, history, social studies, and religion (Tables 2.1 to 2.5); and (3) arts, vocational education, and personal development (Tables 3.1 to 3.5). Within each set of tables, the first table shows course-taking across all schools. Subsequent tables show course-taking for public, Catholic, independent private, and other private schools. In addition to information about the sample, the technical notes contain information about survey design, response rates, variables used in the tables, and methods for estimating standard errors. An appendix contains standard errors of estimates and unweighted sample sizes for levels of classification variables. (68 p.)

---

[54] Abstracts are taken from ERIC when available, otherwise from the NELS:88 bibliography maintained by NORC under the NELS:88 third follow-up contract.

3. Hoachlander, E.G. *A Profile of Schools Attended by Eighth Graders in 1988*, 1991; NCES 91-129.

As part of the National Education Longitudinal Study of 1988 (NELS:88), this study examined the schools attended by eighth-graders in 1988, the year during which the more than 25,000 eighth-graders of the cohort were first studied. NELS:88 provides information on 802 public schools, 105 Catholic schools, 68 other religious schools, and 60 private, non-religious schools. Throughout the report, the unit of analysis is the school rather than students or teachers. Most of the school data were provided by school administrators. The data are used to develop a profile of the schools attended by eighth- graders, with information about various aspects of the learning environment, school policies and programs, and administrators' assessments of school climate. In 1988, 87.9% of eighth-graders attended public schools, 7.6% attended Catholic schools, 2.9% attended other religious schools, and 1.5% attended private non-religious schools. The study shows that eighth-graders learned under a wide range of different conditions in both public and private schools. Fifty-six data tables and five graphs are included. Appendices contain technical notes, information about the accuracy of estimates and procedures, standard errors and unweighted "N"s, and 56 additional tables. (119 p.)

4. Rock, D.A., Pollack, J.M., and Hafner, A. *The Tested Achievement of the National Education Longitudinal Study of 1988 Eighth-Grade Class*, 1991; NCES 91-460.

Sixty tables are presented, which examine the test achievement of a national probability sample of eighth graders in public and private schools. Statistics were obtained from the base-year student survey of the National Education Longitudinal Study of 1988 (NELS:88). Its purpose is to provide policy-relevant data concerning the effectiveness of schools, curriculum paths, special programs, variations in curriculum content, and/or mode of delivery in bringing about educational growth. The NELS:88 test battery includes four tests: (1) reading comprehension; (2) mathematics; (3) science; and (4) history/citizenship/government. This report is a tabular summary of achievement test scores for approximately 24,000 eighth graders from 1,052 schools. Results are grouped into: student background variables; parental involvement variables; and school characteristics and school climate. Reading and mathematics tables contain, in addition to mean scores, the percentage of each group scoring at each proficiency level and the standard error of the percentage estimate. Effect sizes are included to compare group differences. Technical notes on survey design, response rates, variables in the tables, significance testing, and methods for estimating standard errors and effect sizes follow the tables. (122 p.).

5. Kaufman, P., and Rasinski, K.A. *Quality of Responses of Eighth-Grade Students to the NELS:88 Base Year Questionnaire*, 1991; NCES 91-487.

This report presents results of an examination of the quality of responses of eighth-grade students to a subset of variables available in the NELS:88 database. The quality of the data was assessed several ways. The correspondence between parent and student responses to similar items on the similar items on the survey instruments was examined. When data were available, the study examined consistency among responses to related items. Finally, the reliability of several scales created from NELS:88 data was assessed. The indicators of data quality suggest that NELS:88 data display a high degree of accuracy and consistency, comparing favorably with responses from the prior NCES longitudinal study, High School and Beyond Study (HS&B). The quality of student responses to items common to both studies was somewhat less for NELS:88 eighth-graders than for HS&B high school sophomores and seniors, with quality increasing with age, and, as expected from prior research, with reading ability and socioeconomic status. There are 39 tables of NELS:88 data and 2 illustrative bar graphs. (119 p.)

6. McMillen, M. *Eighth to Tenth Grade Dropouts*, 1992; Statistics in Brief series, NCES 92-006.

   This report presents data from the 1988 National Education Longitudinal Study (NELS:88), which started with an eighth-grade cohort and aimed to provide data on dropout experiences as students made the transition into high school and to examine the contextual school and family factors associated with dropping out. The report explains the parameters of the study, the survey methodology, and the data reliability. The data are presented in the following bar graphs: (1) 8th to 10th grade cohort dropout rates by race/ethnicity and sex; (2) 8th to 10th grade cohort dropout rates by region and metropolitan status; and (3) 8th to 10th grade cohort dropout rates by eighth-grade school (public, Catholic, religious private, and non-religious private). (7 p.).

7. Owings, J.A., and Peng, S. *Transitions Experienced by 1988 Eighth Graders*, 1992. NCES 92-023.

   This brief report presents findings regarding two types of transitions experienced by students as they move between the eighth and 10th grades: continuing or dropping out of school and transferring between sectors. While 98% of public school students remained in public schools, over one-third of Catholic school eighth graders and over 25% of National Association of Independent Schools students transferred to public or other private schools. About 6% of all eighth graders were classified as dropouts by spring of their scheduled 10th-grade year. For most students, the move between eighth and 10th grades involves a change of schools and exposure to new educational settings. These transitions may have an impact on student learning and personal development. Consequently, differences in transition patterns and possible outcomes are of major interest. Data were obtained from the base year and first follow-up surveys of the National Education Longitudinal Study of 1988 (NELS:88), which began in 1988 with a sample of 1,052 schools and 24,599 eighth graders. In the spring of 1990, 17,424 students were studied in the first follow-up to determine their education status and progress, and school, community, and work experiences. Four tables present study data, and five graphs illustrate trends from 1988 to 1990. (13 p.).

8. Kaufman, P., and Bradby, D. *Characteristics of At-Risk Students in NELS:88*, 1992; NCES 92-042.

   The study described in this report examined the characteristics of eighth-grade students who were at risk of school failure. The study used data from the National Education Longitudinal Study of 1988, which is a large-scale, national longitudinal study begun in the spring of 1988 when 25,000 eighth graders attending public and private schools across the nation were surveyed along with the students' parents, teachers, and school principals. The students were re-surveyed in 1990, and the base year and follow-up data of NELS:88 taken together provide a wealth of information about eighth graders' as they move in and out of the U.S. school system and into the varied activities of early adolescence. This study, focused on at-risk students within the eighth-grade cohort, examined the following sets of variables: (1) basic demographic characteristics; (2) family and personal background characteristics; (3) the amount of parental involvement in the student's education; (4) the students' academic history; (5) student behavioral factors; (6) teacher perceptions of the students; and (7) characteristics of the students' schools. Black, Hispanic American, and Native American students and students from low-socioeconomic backgrounds were more likely to be at-risk. Male eighth graders were more likely to have low basic skills, but were no more likely to drop out. After controlling for sex and socioeconomic status, Black and Hispanic American dropout rates were found to be the same as that for Whites. However, even when controlling for sex and economic status, Black and Hispanic American students were more likely than White students to perform below basic proficiency levels. (Included are 15 tables in the text and 31 tables in 2 appendixes; 107 p.).

9. Bradby, D. *Language Characteristics and Academic Achievement: A Look at Asian and Hispanic Eighth Graders in NELS:88*, 1992; NCES 92-479.

This report examines the demographic and language characteristics and educational aspirations of Asian American and Hispanic American eighth graders and relates that information to their mathematical ability and reading comprehension as measured by an achievement test. Special attention is paid to students who come from homes in which a non-English language is spoken. Of the 1,505 Asian American students evaluated, 73 percent were reported as language minorities (LMs), while 77 percent of the 3,129 Hispanic American students evaluated were LMs. Of the LM students, 66 percent of the Asian Americans had high English proficiency as compared to 64 percent of the LM Hispanic Americans. Both Asian American and Hispanic American groups had 4 percent of LM students showing low English proficiency. Overall, the study found many similarities between the two groups. However, differences are apparent when data are divided along language proficiency, mathematics achievement, aspiration, and other measures. Statistical data are provided in 33 tables and 44 graphs. Appendices present selected survey questions, technical notes and methodology, and 109 standard error tables. (197 p.).

10. Horn, L., and Hafner, A. *A Profile of American Eighth-Grade Mathematics and Science Instruction*, 1992; NCES 92-486.

This report profiles the mathematics and science instruction received by eighth graders (11,414 eighth graders had teacher reports in mathematics and 10,686 in science) in public and private schools in 1988. A preface lists highlighted findings, tables, and figures included in the document. The body of the report consists of five chapters. Chapter I discusses the purpose and format of the report and limitations of the study. Chapters II and III examine the relationship of various aspects of mathematics and science instruction to students' socioeconomic status and race-ethnicity and type of school attended. Among the aspects examined were the major topics taught, average class size, hours per week attended, allocation of class time, assigned homework, availability of instructional materials, student attitudes toward mathematics and science, and teacher characteristics and qualifications. Chapter IV examines mathematics and science achievement test scores in relation to the various components of instruction measured in the study. Chapter V provides a descriptive profile of the mathematics curriculum, the science curriculum, teacher characteristics and qualifications, classroom characteristics, school type differences, and students' opportunity to learn based on the findings. Appendices that describe the methodology employed and standard errors of estimates reported in tables and figures in the text are provided. (121 p.).

11. Horn, L., and West, J. *A Profile of Parents of Eighth Graders*, 1992; NCES 92-488.

This report profiles the family characteristics and the level of involvement reported by the parents of 1988 eighth graders, using the base year survey and dropout data from the first follow-up. About 93 percent of the parents of the first year sample were interviewed to provide information about home life and family experiences. This study examined child-directed involvement, including activities such as parent-child discussions and school-directed involvement such as parent-teacher association membership and volunteering in the school. There was some indication that parent involvement was related to whether or not students scored below the basic level in reading or mathematics proficiency, but there was a strong relationship between parent involvement and whether or not a student dropped out of school between the 8th and 10th grades. There are 26 tables and 18 figures presenting study findings. (121 p.).

12. Green, P.J. *High School Seniors Look to the Future, 1972 and 1992*, 1993; Statistics in Brief series, NCES 93-473.

In light of the many changes of the past 20 years, it may be expected that plans of high school seniors for further education may have also changed, along with the kinds of jobs they expect to have and the things they regard as important. These questions are examined through data from the National Longitudinal Study of 1972 (NLS-72) and the National Education Longitudinal Study in 1988 (NELS:88), the 1992 Second Follow-Up. The proportion of seniors in academic or college preparatory programs was approximately the same in both years, although enrollment in the general track increased and enrollment in vocational education decreased. In 1992, there was little difference between the sexes in high school program placement. In 1992, only 5.3 of students reported that they would not attend some kind of school after high school, but in 1972, 18.9% had reported that they would not continue. Eighty-four percent in 1992 planned to go to college, compared with the 63% who planned to attend in 1972. Differences for females were dramatic, with female seniors in 1992 four times more likely to plan on graduate or professional school as in 1972. Nearly 60% in 1992 planned a professional career, compared with approximately 45% in 1972. Changes in values were most marked among women, who in 1992 espoused values closer to those traditionally held by men. One figure and three tables present data about the two populations. (6 p.)

13. McMillen, M., Hausken, E., Kaufman, P., Ingels, S., Dowd, K., Frankel, M. and Qian, J. *Dropping Out of School: 1982 and 1992*, Issue Brief series, 1993; NCES 93-901.

In recent years, concern over students dropping out of school has increased. A primary focus is the size of the dropout population, a question that has been addressed in two National Center for Education Statistics (NCES) longitudinal studies. Both studies provide the data needed to consider the dropout experiences between the sophomore and senior years of two groups of students a decade apart in time. Over the 10 years between the 1980-82 High School and Beyond survey (HS&B) and the 1990-92 data from the National Education Longitudinal Study of 1988 (NELS:88) (follow-ups), there was a 43 percent reduction in the percent of sophomores who dropped out of school. The NELS:88 rate for the sophomore cohort of 1990 is 6.2 percent. Relative rankings for racial and ethnic groups did not change over the decade, and in both cohorts the dropout rates for Hispanics were higher than those for Whites and Asians. Rates for Blacks were between those of Hispanic Americans and Whites. In both periods, failure in school and dislike for school were major factors leading students to drop out of school. Pregnancy and marriage were important factors influencing females' decisions to leave school early. Three figures illustrate the discussion. (3 p.)

14. Rasinski, K.A., Ingels, S.J., Rock, D.A., and Pollack, J. *America's High School Sophomores: A Ten Year Comparison, 1980 - 1990*, 1993; NCES 93-087.

    This study of high school sophomores in 1980 and 1990 compares the experiences of students in the two cohorts, identifying changes in in-school and out-of-school activities, academic achievement, self-concept, values, plans, and aspirations. Similarities and differences between the two groups are documented using data from the National Education Longitudinal Study of 1988 (NELS:88) and High School and Beyond (HS&B, 1980). HS&B and NELS:88 sophomores are marked by basic demographic differences, including the smaller size of the NELS:88 1990 cohort, reflecting the baby bust of the 1970s, and a higher proportion of racial minority and poverty status sophomores in 1990. NELS:88 sophomores also reflect the influence of various waves of school reform since the late 1970s and early 1980s. Overall, the comparison paints a pictures that is in most respects encouraging in its portrayal of the high school academic orientation and postsecondary expectations of the 1990 sophomore class. Positive changes, however, are typically small or moderate in magnitude. Among the findings are: (1) general and college preparatory program placement has increased, at the expense of vocational program placement; (2) patterns of extracurricular participation changed especially in musical activities (31% in 1980 to 22% in 1990) and in hobby clubs (21% in 1980 to 7% in 1990); (3) changes in sophomores giving high importance to particular life values (e.g., marriage and family 83% rating this as very important in 1980, 72% in 1990); (4) small but statistically significant increase in the number of females aspiring to traditionally male-dominated non-professional occupations (15.6% in 1980 versus 18.% in 1990). Sixteen tables and 13 figures present data from the 2 studies. Three appendixes contain information about the survey sample sizes, standard errors, and other methodological and technical information. Appendix A contains an additional 20 data tables. (Contains 46 references; xiv, 98 p.)

15. Rock, D.A., Owings, J.A., and Lee, R. *Changes in Math Proficiency Between Eighth and Tenth Grades*. Statistics in Brief series, 1994, NCES 93-455.

    This publication illustrates use of the NELS:88 dichotomous proficiency scores for conducting achievement gain analysis (see Scott, Rock, Pollack and Ingels [entry 21] for an illustration of an alternative gain analysis strategy, the use of mathematics probability of proficiency scores). The findings presented in this report suggest that course-taking patterns in mathematics between eighth grade and the sophomore year of high school represent an important factor in explaining growth in math proficiency. For example, even after controlling for eighth-grade math proficiency, higher math gains were associated with course-taking patterns that reflected advanced level math courses. The report also suggests that eighth-grade students who have higher aspirations for postsecondary education are also more likely to show positive math gains. (20 p.)

16. Finn, J.D. *School Engagement and Students At Risk.* 1993; NCES 93-470.

To examine the proposition that students who do not remain active participants in class or school may be at risk for school failure, regardless of status characteristics such as ethnicity or family income, two studies of engagement and achievement were conducted. The studies used a nationwide sample of eighth-grade students from the U.S. Department of Education's National Educational Longitudinal Study of 1988 (NELS:88) survey. The first study examined the association of participation in school and classroom activities with academic achievement in 15,737 eighth-graders attending public schools. The study found that participation and academic achievement were positively related, even after controlling for gender, ethnicity, and socioeconomic status. The second study examined behaviors that distinguish students who are at risk, but who are successful in school subjects, from their less successful peers. A sample of 5,945 eighth-graders identified as at risk by virtue of race, home language or socioeconomic status were classified as unsuccessful, passing, or successful, based on reading and mathematics achievement tests. It was found that achievement groups were distinct in terms of variety of classroom participation behaviors, out-of-class participation, and interactions with their parents regarding school. Three major conclusions were drawn from the investigation: (1) behavioral risk factors are indeed related to significant outcomes of schooling; (2) risk behaviors have their roots in the early school years or before; and (3) more attention should be given by educators and researchers to encouraging the potential of "marginal" students. Further research is needed to identify manipulable aspects of classroom and school processes that encourage student engagement. Appendices provide details of the measures used in the studies and the standard deviations and correlations of the measures. Contains 91 references. (117p.).

17. Rasinski, K.A. *The Effect of High School Vocational Education on Academic Achievement Gain and High School Persistence: Evidence from NELS:88*, 1994; Report to the Office of Research, OERI, U.S. Department of Education.

This analysis of the effects of vocational education on academic achievement and high school persistence was prepared for the National Assessment of Vocational Education. Data from the NELS:88 high school transcript study were analyzed to assess the influence of vocational programs and vocational courses on gains in tested achievement in mathematics, science and reading. The analysis also addresses the issue of whether, regardless of their effect on achievement gain, vocational programs serve to keep students from dropping out of high school.

18. Ingels, S.J., Schneider, B., Scott, L.A., and Plank, S.B. *A Profile of the American High School Sophomore in 1990*, 1994; NCES 95-086.

This cross-sectional report supplies descriptive analyses of the educational situation of a representative sample of the nation's 1990 sophomores (comprising 1988 eighth-grade cohort members who were in tenth grade in the spring term of 1990 and "freshened" sophomores, students new to the sample who were not in the base year sampling frame, either because they were not 1987-88 eighth graders or not in the United States). *Chapter 1* provides an in-depth view of tenth-grade learning and achievement in mathematics. *Chapter* 2 supplies a summary of tenth-grade course-taking patterns and instructional practices in science, reading, social studies, and foreign language. *Chapter 3* explores the tenth grader's life outside of school, including the process of educational decision making. *Chapter 4* reports on sophomores' plans for the future, including their educational expectations and aspirations. Taken together, these four chapters provide a statistical profile of the American high school sophomore in 1990, which is summarized in *Chapter 5*. Appendices A and B provide technical notes and tables of standard errors of measurement and sample sizes for all reported population estimates. Appendix C contains further information about NELS:88 in general and the first follow-up in particular. Appendix D presents additional tabulations on reading and social studies achievement.

19. Myers, D., and Heiser, N. *Students' School Transition Patterns between Eighth and Tenth Grades Based on NELS:88*, 1994; NCES 94-137.

    Analysis of NELS:88 data makes it possible to explore the relationships between student and family characteristics and the likelihood of shifting among public and private schools as students progress from eighth to tenth grade. This study examines the characteristics of students who switch between sectors (public to private, or private to public) as they move from eighth to tenth grade. Five sets of variables were examined to estimate the association between variations in the students' transition patterns and student and family characteristics: (1) basic student and family background characteristics; (2) the amount of parental involvement in the student's education; (3) the student's academic achievement and educational expectations; (4) the characteristics of the student's school; and (5) parental satisfaction with the student's school. Examination of these characteristics permits four research questions to be addressed: (1) How many students shift between the public and private school sectors? How many students shift from one private school to another?; (2) Who shifts between sectors? Are family background factors, parental involvement, or students' academic achievement or educational expectations associated with variations in transition patterns?; (3) Are school characteristics associated with students' propensity to move between school sectors?; (4) Do parents who are dissatisfied with their children's school shift their children to another type of school?

20. Green, P.J., Dugoni, B.L., Ingels, S.J., and Camburn, E. *A Profile of the American High School Senior in 1992*, NCES, 1995; NCES 94-384.

    This report examines the background of 1992 high school seniors, the school environment which shaped their senior year experiences, the curriculum in which they were enrolled, their academic achievement, their plans and expectations for the future, and their non-academic experiences during this important period of development. *Chapter 1* provides a demographic profile of high school seniors. *Chapter 2* depicts their school and peer environment by recording seniors' perceptions of school, of the safety of their school, and of the values of their peers. *Chapter 3* describes their course and program enrollments. *Chapter 4* examines the tested achievement of 1992 seniors. *Chapter 5* describes their short-term plans--their postsecondary plans, steps they have taken to gain entrance to college, and factors they considered in choosing a postsecondary institution. *Chapter 6* reports on seniors' plans and expectations for the future. Finally, *chapter 7* describes the senior cohort's experiences outside of school--use of illicit drugs and alcohol, television viewing, jobs, participation in school government, and community volunteer work. Taken together, these seven chapters provide a statistical profile of the American high school senior in 1992. Appendices provide unweighted (sample) Ns and standard errors.

21. Scott, L.A., Rock, D.A., Pollack, J.M., and Ingels, S.J. *Two Years Later: Cognitive Gains and School Transitions of NELS:88 Eighth Graders*, 1994, NCES 94-436.

    This report describes the growth in cognitive skills and achievement, and the continuities and discontinuities experienced in school and at home by the NELS:88 eighth grade-cohort during the two years between the study's base year (1988) and first follow-up (1990) surveys. Four distinct topics are addressed, involving both school dropouts and persisters. (1) By 1990, some 1988 eighth graders were dropouts; this report describes their characteristics and the reasons they gave for dropping out of school. (2) This report presents findings on patterns of school transition--changing from a public eighth-grade school to a private high school or vice versa--and the changes in perception of safety and overall learning environment cohort members experienced after moving from a typically more homogeneous middle school environment to a more heterogeneous high school environment. (3) Additionally, this report summarizes major changes in home life and family, such as the divorce or remarriage of a parent, that also occurred during cohort members' transition to and/or early years of high school. (4) Finally, this report examines the 1988-90 achievement gain of the eighth-grade cohort, thus addressing several basic questions: How much did students gain in achievement in the two years following eighth grade?; Who gained, in what subjects, and (for mathematics) in what way (that is, at what skill or proficiency level)? The analysis of growth in achievement illustrates use of the NELS:88 continuous measure of probability of mathematics proficiency (see Rock, Owings and Lee [1994, entry 15] for an illustration of mathematics achievement gain analysis using NELS:88 dichotomous proficiency scores).

22. Green, P.J., Dugoni, B.L., and Ingels, S.J. *Trends Among High School Seniors, 1972 - 1992.* NCES, 1995; NCES 94-380.

    This report compares the NLS-72 1972, HS&B 1980, and NELS:88 1992 senior cohorts. It supplies a sociodemographic description of the three senior cohorts. The report compares the cohorts' high school program placement, course-taking and achievement, as well as participation in extracurricular activities. It also compares 1972, 1980 and 1992 seniors' plans for the next year, noting the proportions who planned to work full-time in the year following graduation, the type of postsecondary institution seniors planned to attend, college selection, and major field of study. Finally, the report compares the future educational and occupational aspirations of the three senior cohorts.

23. Hoffer, T.B. and Moore, W. *High School Seniors' Instructional Experiences in Science and Mathematics*, 1995.

    This study examines the instructional experiences of a national sample of 1992 high school seniors in the subjects of science and mathematics. The data analyzed are from the second follow-up survey of the National Education Longitudinal Study of 1988 (NELS:88). The information on instruction comes from the NELS:88 1992 survey of teachers, which collected questionnaires from the science and mathematics teachers of 9,853 sampled seniors enrolled in public and private high schools across the United States. Two general questions are addressed: Why do students' instructional experiences differ? and What consequences do the differences have for student academic achievement? Descriptive statistics on the relationships of students' family backgrounds, curriculum track level, and high school characteristics with instructional variables are presented. Regression analysis is used to estimate the effects of different instructional experiences on achievement score gains from 1990 to 1992.

24. Green, P.J., and Scott, L.A. ***"At-Risk" Eighth Graders Four Years Later,*** NCES, 1995; NCES 95-736.

This publication in the NCES Statistics in Brief series extends to the 1992 second follow-up the analysis of "at risk" factors begun by Hafner, Ingels, Schneider, and Stevenson (1990) with the base year data and continued by Scott, Rock, Pollack and Ingels (1995) with the first follow-up data. Approximately 26 percent of eighth grade students had an "at risk" characteristic and 20 percent had two or more of these risk factors. Examining the outcomes of at-risk eighth graders four years later (1992), Green and Scott examine both achievement outcomes and social and behavioral outcomes. With respect to achievement, Green and Scott report that (1) approximately one in six adolescents with multiple risk factors were unable to comprehend basic written information, testing below the basic level in reading in 1992. In comparison, only about one in twenty of those with no risk factors were unable to demonstrate basic reading skills. (2) At-risk students were more likely than others in 1992 to test poorly in mathematics. Over half of those with multiple risk factors tested at the basic level, or below, In contrast, only about a fifth of those with no observed risk factors tested at that level. (3) Nearly one-third of students with multiple risk factors could not demonstrate even a "common knowledge" of science. Only 12.2 of students with no risk factors failed to demonstrate competence at this basic level. In respect of 1992 social and behavioral outcomes, and 1992 graduation status, Green and Scott report (1) Students who had multiple risk factors in 1992 were **no more likely** than others to report using illicit drugs (marijuana or alcohol), or to report abusing alcohol than those with no risk factors. (2) Eighth graders who had multiple risk factors in 1988 were more likely than others to have a child in 1992--18.9 percent compared to 5.4 percent. (3) Students with multiple risk factors were more likely than others to report being suspended, and being sent to a juvenile home or detention center. (4) Among 1988 eighth graders with no risk factors, ninety percent had earned a high school diploma by 1992. Among 1988 eighth graders with multiple risk factors, sixty percent had earned their high school diploma by 1992, while the other forty percent had not.

25. Rock, D.A., and Pollack, J.M. ***Mathematics Course Taking and Gains in Mathematics Achievement.*** NCES, 1995; NCES 95-714.

This publication in the NCES Statistics in Brief series extends to the 1992 second follow-up the analysis of 1988-1990 test score gains reported in Scott, Rock, Pollack and Ingels (1995). However, instead of self-report data on courses completed, Rock and Pollack utilize the results of the NELS:88 high school transcript study. Rock and Pollack found that when student gains in tested mathematics achievement were cross-classified by grade in school and highest level of mathematics course taken:

- Slightly over 60 percent of high school students do not go beyond the algebra 2/geometry level of coursework.
- Approximately 1 out of 9 students take a calculus course while in high school; about 1 out of 4 students, in contrast, never go past algebra in their high school career.

- Growth in arithmetic, algebra, and geometry achievement appears to be greater in the first two years of high school than in the last two years for almost all course-taking categories.

- Students who take the more advanced mathematics courses show greater gains, both between 8th and 10th grade, and between 10th and 12th grade.

- Students who do not take advanced courses make greater gains on test items dealing with computational skills, while students in the advanced courses make larger gains on test items requiring conceptual understanding and problem-solving skills. In fact, for these students, significant growth does not occur until they move into the pre-calculus level of coursework.

26. Hoffer, T.B., Rasinski, K.A., and Moore, W. ***Social Background Differences in High School Mathematics and Science Coursetaking and Achievement.*** NCES, 1995; NCES 95-206.

This publication in the NCES Statistics in Brief series uses NELS:88 test and transcript data to address two questions: (a) To what extent do students from different social backgrounds differ in the numbers of courses they complete during high school and in their final levels of academic achievement? And (b) Does additional coursework have comparable relationships to measured achievement gains during the high school years for students from different backgrounds. Hoffer, Rasinski and Moore report the following findings: (1) Gender differences in the numbers of science and mathematics courses students complete are not significant. Students from higher socioeconomic families, however, complete more courses in these subjects. (2) The numbers of math and science courses students complete in high school are strongly related to how much their test scores increase from the end of eighth grade to the end of senior year. (3) Additional coursework pays off about equally for all students in terms of increasing achievement gain, regardless of gender, race-ethnicity, and social class.

ISBN 0-16-048127-9

90000

9 780160 481277

320

United States
Department of Education
Washington, DC 20208–5651

Official Business
Penalty for Private Use, $300

Postage and Fees Paid
U.S. Department of Education
Permit No. G–17

Fourth Class Special
Special Handling

BEST COPY AVAILABLE